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JANUARY 1990
QUARTERLY SAMPLING REPORT
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CALIFORNIA

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1.0 INTRODUCTION

This report summarizes the fifteenth RCRA quarterly ground water monitoring sampling and analyses period at Southern California Chemical (SCC), Santa Fe Springs, California. Contained herein are the results of laboratory analyses of ground water samples and water level measurements obtained during the period January 22 to January 25, 1990.

The purpose of the ground water sampling program, which began in February 1985, is to monitor ground water quality and establish a database of the compounds in the ground water beneath the site. The primary goals of the program are (a) to assess the location and concentration of chromium and cadmium contamination, (b) to detect and evaluate water quality changes, and (c) to characterize background water quality.

In addition to the data obtained during the January 1990 sampling, this report contains plot plans showing contaminant distribution (Appendix A) and a summary of all previous sampling data (Appendix B). Copies of the original laboratory results are included in Appendices C and D. Chain-of-custody records for the January 1990 sampling are included in Appendix E.

2.0 MONITOR WELL SAMPLING

Ground water sampling, utilizing existing on-site monitoring wells, was conducted by CDM field personnel during the period of January 22 to January 25, 1990. Field activities were performed in general accordance with the ground water sampling protocol as outlined in Section 4.3.3 of the unapproved, RCRA Facility Investigation (RFI) Work Plan (CDM, November 1989). Prior to the submittal of the RFI Work Plan for regulatory agency review and approval, the unapproved Kleinfelder Quality Assurance Project Plan (QAPP, May 1988) was used as the primary ground water sampling guidance document.

Twelve monitor wells were sampled as part of this program (Figure A-1, Appendix A). Of these, 11 are screened in the upper portion of the Hollydale aquifer. The 12th well, MW-4A, is screened in the lower portion of the Hollydale aquifer. An additional monitoring well, MW-06A, historically has not been sampled for ground water analysis since it is a dry well. The well is screened in the lower portion of the uppermost aquifer, the Gage Aquifer, which is dry below the site.

As outlined in the Kleinfelder QAPP, certain analyses have been performed on a quarterly schedule, while others have recently been done on a biannual schedule, coinciding with quarterly sampling (effective September 1988). Ground water sampling, utilizing monitoring wells MW-1 through MW-6B, was initiated at the site by J. H. Kleinfelder and Associates (Kleinfelder) at the end of February, 1985. Six additional wells (MW-4A and MW-7 through MW-11) were installed at the site in July 1985, thereby increasing the total number of active wells to 12. Quarterly sampling of all 12 wells was initiated in March 1986. Commencing with the January 1989 sampling event, Camp Dresser & McKee Inc. (CDM) has been responsible for all ground water monitoring activities at the facility. A detailed listing of analytical parameters per sampling event has been provided in Table 2-1.

As in the past, the Regional Water Quality Control Board (RWQCB), and California Department of Health Services (DHS) were notified prior to commencement of sampling activities and were provided the opportunity to observe sampling and to collect duplicate and/or split samples. No

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
3/85	X (includes Cd & total Cr)	X	QUAD	Cu&ZN*	X*	X	X*	—	Sampled wells MW1,2,3,4, 5,&6B. Sulfide, nickel and * requested by DOHS and RWQCB.
7/85	—	—	QUAD	Cd,Cr	X	—	X	—	Sampled wells MW-4A,7,8,9, 10 and 11.
3/86	X	X	QUAD	Cu&Zn	X	X	X	—	Sampled 12 wells (MW1,2, 3,4,4A,5,6B,7,8,9,10 and 11).
7/86	—	—	QUAD	X	X	X	X	624	Sampled all 12 wells (as previous).
9/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
12/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
3/87	—	—	QUAD	X	X	X	X	601/602	Sampled 11 wells, not 4A
7/87	—	—	QUAD	X	X	X	X	601/602	After July 1987, all 12 wells were sampled during each event.
10/87	—	—	QUAD	X	X	X	X	601/602	
2/88	—	—	QUAD	X	X	X	X	601/602	
6/88	—	—	X (not QUAD)	X	X	X	X	601/602	Performed statistical analysis (t-test) on Indicator Parameters (IPs).

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
9/88	—	—	—	X	X	X	X	601/602	IPs & volatile organics from MW1, 2,4A, 5, 6, 7 analyzed semi-annually in June/Dec.
1/89	—	—	QUAD	X	X	X	X	601/602	After January 1989, volatile organics analyzed for all 12 wells.
4/89	—	—	—	X	X	X	X	601/602	
7/89	—	—	QUAD	X	X	X	X	601/602	Performed statistical analysis of January through July 1989 data (IPs, total and hexavalent chromium).
10/89	—	—	—	X	X	X	X	601/602	
1/90	—	—	QUAD	X	X	X	X	601/602	

Appendix III Parameters - As, Ba, Cd, Cr, F, Pb, Hg, N, Se, Ag, Endin, Lindane, Methoxychlor, Toxaphene, 2,4,D, 2,4,5TP (Silvex), Radium, Gross Alpha & Beta, turbidity, coliform bacteria

Water Quality Parameters. - Cl, Fe, Mn, Phenols, Na, SO_4

Indicator Parameters (IP) - TOX, TOC, pH, EC

624 = Volatile organics analysis

601/602 - Purgeable halocarbons/aromatics analysis

representatives from either agency were present at any time during sampling. In addition to these agencies, EPA was also notified of the sampling program. Similarly, no representatives from that agency were present at anytime during sampling.

2.1 Sampling Procedure

To ensure continuity with previous quarterly samplings, field sampling and decontamination procedures, as detailed in the RFI Workplan, were based on procedures established by Kleinfelder in their unapproved QAPP with some minor modifications. Sampling practices included efforts to detect floating product and hydrocarbon vapors at each well, measurement of the static water level and total depth of each well for calculating pre-sampling evacuation volumes, purging and sampling of ground water for laboratory analysis, decontamination of sampling equipment, and correct handling of sample containers. Deviations from the Kleinfelder QAPP were generally limited to implementation and decontamination of the submersible sampling pump systems. This was necessitated by a change in design of the pump system beginning with the April 1989 sampling period. Details of these deviations are discussed in Sections 2.1.3 and 2.2.

2.1.1 Detection of Organic Vapors and Immiscible Layers

Due to the known presence of organic compounds in the ground water in the Hollydale aquifer, efforts were made to determine if organic well vapors and immiscible floating product layers could be detected in the field. Prior to opening a monitor well for sampling, the air immediately above the well was monitored for organic vapors through the use of a photoionization detector (PID) equipped with a 10.0 eV lamp. The head space of each well was checked for volatile organic vapors by inserting the intake tube of the PID into the well head immediately after removing the monitoring well security plate and opening the casing cap. The maximum and average reading values for each well were recorded in the field log book.

The depth to static water level was measured to the nearest 0.01 foot using a decontaminated electric water level sounder. These data were subsequently

input in calculations for determining wetted casing volumes and for use in determining ground water elevations at the facility.

A decontaminated, 2-inch diameter, clear teflon bailer, equipped with a bottom ball-check valve, was lowered and immersed into the ground water approximately half its length and brought up to the surface. Although none were observed, field personnel were prepared to record the thickness of floating product or note any iridescence on the water surface.

2.1.2 Purge Volume Determination

The total depth of each monitoring well was measured by lowering the water level sounder line until the sounder weights could be felt contacting the well bottom. This value was compared with the total depth of the well casing, as it had been constructed, to determine the amount of sediment fill present in each well. One wetted casing volume was then calculated by using the following formula:

$$1v = \pi \times r^2 \times L$$

where: 1v = one wetted casing volume
L = length of wetted casing
π = 3.142
r = inside radius of the casing

2.1.3 Ground Water Purging and Sampling

A decontaminated 40-inch bladder pump consisting of a teflon bladder fitted inside a stainless steel pump body was lowered to the approximate middle of the wetted, open screened casing of each well, where feasible. The air supply and sample discharge lines were constructed of teflon as well. Prior designs of the bladder pump included separate teflon-coated air supply and sample discharge lines. A design change involved the use of coaxial tubing wherein the sample discharge line was encased within the air supply line. To ensure quality control on decontamination of the assembly, the inner surface of the sample discharge line and the outer surface of the air supply line were teflon coated. This ensured that all surfaces coming into contact with ground water would be teflon coated. In addition, the

longer 4-inch diameter wells were evacuated more effectively and efficiently by using the bladder pump's ability to be extended from a 40-inch to a 72-inch assembly and used as an air lift pump. A reduction to the 40-inch bladder assembly and final well evacuation was done prior to extracting samples for laboratory analysis.

Field parameters (pH, specific conductance [EC], temperature, salinity, and visual characteristics) were monitored and recorded at appropriate intervals during the purging of ground water from each well. Prior to evacuating the ground water, the EC and pH meters were calibrated and checked with appropriate calibration solutions. Ground water was purged until the parameters had stabilized and a minimum of three saturated well casing volumes had been evacuated. All purge water collected from each well was contained and labeled in SCC-supplied 55-gallon barrels for treatment and disposal by SCC at the on-site wastewater treatment facilities.

Ground water samples were discharged directly into previously labeled sample bottles which were then placed inside plastic zip-lock baggies and placed in an ice-cooled chest. Samples for metals analyses (cadmium, copper, zinc and total chromium [Cd, Cu, Zn and Cr, respectively]) were field filtered with a sterile, 0.45-micron, in-line filter as the appropriate bottles were filled. Precautions were taken to ensure that no headspace or bubbles were present in sample vials for volatile organic compound analysis.

Ground water samples were collected in the following sequence as determined in the Kleinfelder QAPP:

- EPA Method 601/602
- TOX (Quadruplicate)
- TOC (Quadruplicate)
- Metals (Cd, Cu, Zn, Cr)
- Hexavalent Chromium
- Chloride/Nitrate
- pH/EC (Quadruplicate)

Ground water sample bottles were numbered using the following format:

(e.g.) SCC-MW01-006

Where:

SCC - designates site acronym
MW01 - designates sample location number (MW = Monitoring Well)
EB - designates equipment blank sample
SP - designates spiked samples
TB - designates travel blanks
DIW - designates de-ionized water sample
006 - designates sequential sample number (per sampling event)

This was the fifth round of sampling conducted by CDM, however, since a 003 sequence number had been assigned to several quality assurance samples during the April 1989 sampling event, a 006 sequence number was assigned to all ground water samples collected during this round. Sample label information included date and time of sampling, CDM sample number, and analytical parameters.

2.1.4 Sample Handling

All sample containers that were collected from each well were accompanied by chain-of-custody forms that indicated the label information as well as the responsible person during each step of the transportation process. All samples were hand-delivered to the appropriate laboratories on the day that they were collected, and a copy of the chain-of-custody for that day was retained by CDM field personnel. The laboratories were notified at the time of delivery that one or more Cr(VI) sample(s) were contained in the shipment to ensure that the samples would be analyzed within the prescribed 24-hour holding period.

2.2 Equipment Decontamination Procedures

The following sections describe the procedures utilized to decontaminate ground water sampling equipment.

2.2.1 Sampling Pump/Lines Decontamination

The bladder pump assembly and coaxial tubing were decontaminated to reduce the possibility of cross-contamination between monitoring wells. The first step in the decontamination procedure was to connect the steam cleaner directly to the pump assembly via a quick coupler, and steam clean the interior of the pump and discharge line. The exterior of the coaxial tubing was steam cleaned as well as the exterior of the reel holding the coaxial tubing.

The final decontamination step was accomplished by submerging the pump into a decontaminated polyvinylchloride (PVC) tube containing DIW and pumping approximately 5 gallons of DIW through the system. An additional five gallons of DIW were then pumped to allow the collection of equipment blanks. A sample of the DIW was taken to perform confirmation analyses for comparison in the event of anomalous laboratory results.

The decontamination of the exterior pump line was performed over a plastic waterproof tarp. The tarp was placed on a gently sloping surface and bermed up at the lower edges, allowing the decontamination water to flow away from the equipment being cleaned. The spent water was recovered and stored in 55-gallon drums for treatment by SCC in the facility's wastewater treatment system.

2.2.2 Accessory Sampling Equipment Decontamination

Accessory sampling equipment such as the teflon bailer and the water level sounder were decontaminated to prevent cross-contamination between the monitoring wells. With the exception of steam-cleaning, the bailer was disassembled and decontaminated exactly as the bladder pump assembly components. The teflon bailer was not steam-cleaned because initial attempts showed that the high temperatures would have melted the bailer.

The water level sounder was decontaminated between wells by steam-cleaning the line.

3.0 LABORATORY TESTING

Two laboratories were utilized as a quality control measure intended to ensure the accuracy of the laboratory analyses performed on the ground water samples. Analytical and duplicate testing was provided by Analytical Technologies, Inc. (ATI), San Diego, California. West Coast Analytical Service (WCAS) of Santa Fe Springs, California prepared spike samples that were submitted to ATI for assessment of analytical consistency. Spike sample preparation and analysis is discussed in Section 4.2.

During the January quarterly sampling event, a total of 23 water samples were submitted for laboratory analysis. Seventeen samples consisting of 12 monitor well (MW) samples, two duplicate monitor well samples (MW-3 and 4), and two equipment blanks (EB) were collected and submitted to ATI for analysis of purgeable halocarbons/ aromatics (601/602), the four RCRA indicator parameters (total organic carbon, total organic halogens, pH and specific conductivity) in quadruplicate, cadmium, total and hexavalent chromium, copper, zinc, chloride and nitrate. A sample of the deionized water (DIW) used to make up the equipment blanks and for decontamination purposes was also submitted for analysis of the above parameters, with the exception of the indicator parameters. Four travel blanks (TB) were also submitted to ATI for analysis of purgeable halocarbons/ aromatics. WCAS prepared a spiked sample (SP) for analysis of purgeable aromatics and metals by both ATI and WCAS.

The January 1990 ground water analytical results are discussed in Section 6.0 and summarized in Tables 6-1 through 6-4. Quality assurance analytical results (duplicates, equipment blanks, travel blanks, and spiked samples) are discussed in Section 4.0 and summarized in Tables 4-1 through 4-4. Historical Kleinfelder and CDM ground water analytical data are summarized in Appendix B. Individual analytical reports for January 1990 are located in Appendices C and D. Chain-of-custody records are located in Appendix E.

4.0 QUALITY ASSURANCE

To verify the accuracy and validity of analytical data resulting from laboratory testing, certain quality assurance procedures were implemented. These procedures included the use of duplicate samples, spiked samples, equipment blanks, travel blanks, and the use of chain-of-custody forms.

4.1 Duplicate Samples

Duplicate ground water samples from two of the twelve monitoring wells were submitted to ATI for analysis. Several procedural changes in QA protocols were implemented during the July 1989 sampling event. Prior to July 1989, up to four duplicate samples per sampling event had been submitted to the laboratory, with the collection of 1 duplicate sample to every three monitor well samples. Standard accepted practice is to submit one duplicate sample for every tenth sample, a ratio of 1 to 10. The previous frequency was determined to be excessive and was revised to reflect current accepted practice. All other subsequent duplicate samples have been collected at the 1 in 10 frequency.

Another change made during the July 1989 sampling event was the submittal of the monitor well samples and duplicate samples to only one laboratory. Previous sampling and analysis utilized a second laboratory to perform duplicate testing. Again, standard practice is to send duplicate samples to the laboratory performing the primary analysis, as a check on the laboratory's precision. During the April 1989 sampling, ENSECO was the primary laboratory, with CKY utilized to perform duplicate testing. It was not possible to resolve discrepancies and inconsistencies which existed in the duplicate analytical results because it could not be determined which analytical data was erroneous. For this reason, it was decided to submit all subsequent monitor well and duplicate samples to the same laboratory. ATI was used for the January 1990 sampling event.

During the January 1990 round of sampling, two duplicate samples were collected from monitoring wells MW-3 and MW-4. The duplicate samples from

wells MW-3 and MW-4 were submitted to the analytical laboratory as blind samples, and were designated MW-30 and MW-31, respectively, on the Chain of Custody forms. Monitor well MW-4 was selected because it generally yields the poorest quality ground water, and MW-3 was selected because of the detection of elevated levels of several purgeable halocarbon/aromatic compounds during the previous July and October 1989 sampling events. The results of the duplicate analyses have been compiled in Tables 4-1 through 4-4.

As can be seen by an examination of the tables, with some exceptions, the results of the duplicate analyses are in close agreement. Ethylbenzene was detected in the duplicate sample for well MW-3 at a concentration of 140 $\mu g/l$. The original MW-3 ethylbenzene concentration was 110 $\mu g/l$. The duplicate result was about 21 percent higher than the original results. As shown in Table 5-1 of the RFI Workplan, duplicate values which occur in the range $\pm$ 20 percent are acceptable. The duplicate result for ethylbenzene at MW-3, therefore, is only slightly above the acceptable limit.

The original and duplicate purgeable halocarbon results for wells MW-3 and MW-4 were also in close agreement. The compound carbon tetrachloride was detected at MW-3 at a concentration of 28 $\mu g/l$. The duplicate result was 34 $\mu g/l$, 18 percent higher than the original sample, well within the acceptable range. Chloroform was detected in both MW-3 and MW-4 at 23 and 5.10 $\mu g/l$, respectively, with duplicate results at 25 and 5.20 $\mu g/l$, respectively. The duplicate results were between 1 and 2 percent higher than the original results. 1,1,-Dichloroethane was detected in MW-04 at 72 $\mu g/l$. The duplicate result was 74 $\mu g/l$, 3 percent higher than the original result.

1,1-Dichloroethene was detected in both MW-3 and MW-4. MW-3 had a concentration of 4 $\mu g/l$, with a duplicate concentration of 4.9 $\mu g/l$. MW-4 results show a concentration of 33 $\mu g/l$, with a duplicate concentration of 40 $\mu g/l$. The duplicate results for both MW-3 and MW-4 are 18 percent higher than the original. For the compound 1,2-dichloroethane, MW-3 had a concentration of 20 $\mu g/l$, with a duplicate result of 21 $\mu g/l$. The duplicate was 5 percent higher than the original. Duplicate results for

TABLE 4-1
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03	MW03(Dup)	MW04	MW04(Dup)	TB01	TB02	TB03	TB04
Bromodichloromethane	< 0.20	6.80	5.10	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	< 0.20	0.92	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Bromomethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Carbon Tetrachloride	< 0.20	< 0.20	< 0.40	28.00	34.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Chloroform	< 0.20	7.60	6.30	23.00	25.00	5.10	5.20	< 0.20	< 0.20	< 0.20	< 0.20
Chloromethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Dibromochloromethane	< 0.20	7.40	5.30	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichlorobenzene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	< 0.50	< 0.50	< 0.50	< 0.50
Dichlorodifluoromethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	72.00	74.00	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethene	< 0.20	< 0.20	< 0.40	4.00	4.90	33.00	40.00	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloroethane	< 0.20	< 0.20	< 0.40	20.00	21.00	100.00	100.00	< 0.20	< 0.20	< 0.20	< 0.20
1,2 Dichloroethane (Total)	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
cis-1,3-Dichloropropene	< 0.20	< 0.20	< 0.40	< 20.00	< 20.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
trans-1,3-Dichloropropene	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Methylene Chloride	< 2.00	< 2.00	< 4.00	< 5.00	< 2.00	74.00	74.00	< 2.00	< 2.00	< 2.00	< 2.00
1,1,2,2-Tetrachloroethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Tetrachloroethene	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
1,1,1-Trichloroethane	0.27	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethene	< 0.20	< 0.20	< 0.40	65.00	74.00	220.00	240.00	< 0.20	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	< 2.00	< 2.00	< 4.00	<20.00	< 20.00	< 50.00	< 50.00	< 2.00	< 2.00	< 2.00	< 2.00
Vinyl Chloride	< 0.20	< 0.20	< 0.40	< 2.00	< 2.00	< 5.00	< 5.00	< 0.20	< 0.20	< 0.20	< 0.20

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ATI.
< Denotes non-detection at indicated detection limit

DIW=De-ionized Water
EB=Equipment Blank
TB=Travel Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03	MW03(Dup)	MW04	MW04(Dup)	WCAS	SP01	TB01	TB02	TB03	TB04
Benzene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	126.00	92.00	< 0.50	< 0.50	< 0.50	< 0.50
Ethylbenzene	< 0.50	< 0.50	< 1.00	110.00	140.00	< 12.00	< 12.00	82.00	97.00	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	< 0.50	< 0.50	< 1.00	< 5.00	< 5.00	< 12.00	< 12.00	108.00	100.00	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes, Total	< 1.00	< 1.00	< 2.00	< 10.00	< 10.00	< 25.00	< 25.00	190.00	210.00	< 1.00	< 1.00	< 1.00	< 1.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.

DIW=De-ionized Water
EB=Equipment Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)
SP=Spiked sample

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03	MW03(Dup)	MW04	MW04(Dup)	WCAS	SP01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.12	0.12	0.52	0.52
Chromium, Hexavalent	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	109.00	108.00	1.00	0.94
Chromium, Total	< 0.01	< 0.01	0.03	< 0.01	< 0.01	95.10	97.10	5.30	5.10
Copper	= 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	= 0.02	1.50	1.60
Zinc	0.02	< 0.01	0.02	= 0.01	= 0.01	= 0.01	= 0.01	2.80	3.10
Chloride	< 2.00	< 2.00	< 2.00	309.00	300.00	2200.00	2200.00	NA	NA
Nitrate (Nitrogen)	< 0.05	< 0.05	< 0.05	1.30	1.20	0.68	0.67	NA	NA

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.
NA= Not Analyzed

DIW=De-ionized Water
EB=Equipment Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)
SP=Spiked sample

TABLE 4-4
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
QUALITY ASSURANCE SAMPLES

COMPOUND (units)	EB01	EB02	MW03	MW03 (Dup)	MW04	MW04 (Dup)
EC 1 (umhos/cm)	< 20.00	< 20.00	1970.00	1970.00	4340.00	4330.00
EC 2 (umhos/cm)	< 20.00	< 20.00	1990.00	2010.00	4380.00	4340.00
EC 3 (umhos/cm)	< 20.00	< 20.00	2000.00	2020.00	4360.00	4340.00
EC 4 (umhos/cm)	< 20.00	< 20.00	2010.00	2020.00	4440.00	4370.00
pH 1 (lab units)	6.55	6.12	7.41	7.46	6.70	6.48
pH 2 (lab units)	6.56	6.05	7.44	7.42	6.67	6.66
pH 3 (lab units)	6.61	5.93	7.49	7.53	6.72	6.66
pH 4 (lab units)	6.66	6.21	7.46	7.45	6.67	6.56
TOC 1 (mg/l)	< 0.50	0.90	38.20	39.70	59.00	58.60
TOC 2 (mg/l)	1.10	0.90	38.60	38.70	59.30	59.00
TOC 3 (mg/l)	1.20	1.00	37.90	38.40	57.00	58.70
TOC 4 (mg/l)	0.80	1.10	37.30	38.30	59.10	59.00
TOX 1 (ug/l)	16.00	18.00	190.00	170.00	1700.00	1100.00
TOX 2 (ug/l)	16.00	21.00	250.00	210.00	1700.00	1000.00
TOX 3 (ug/l)	22.00	19.00	260.00	210.00	1300.00	1100.00
TOX 4 (ug/l)	24.00	20.00	210.00	210.00	2200.00	1500.00

< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI.

EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halide

trichloroethene were also acceptable, ranging from eight to 12 percent higher in the duplicate samples from wells MW-4 and MW-3, respectively.

Duplicate results for metals, nitrate and chloride also agreed closely with the original results. Hexavalent chromium was detected in MW-4 at 109 μg/l, with a duplicate result of 108 μg/l. The duplicate result was 1 percent lower than the original. Total chromium was detected in MW-4 at 95.10 μg/l. The duplicate result was 97.1 μg/l, which is 2 percent higher than the original. Chloride was detected at MW-3 at 309 μg/l, with a duplicate result of 300 μg/l. The duplicate result was 3 percent lower than the original. Nitrate (nitrogen) was detected as wells MW-3 and MW-4 with reported concentrations of 1.30 and 0.68 μg/l, respectively. The duplicate result for MW-3 was 1.2 μg/l, which is 8 percent lower than the original result. The duplicate result for MW-4 was 0.67 μg/l, which is about 2 percent lower than the original result.

As shown on Table 4-4, duplicate analytical results for the indicator parameters pH, EC and TOC were in close agreement. With the exception of the TOX results, variation between averaged quadruplicate measurements ranged from 1 to 3 percent. A comparison of TOX duplicate results, however, showed significant variation. Averaged duplicate TOX values from wells MW-3 and MW-4 were between 12 and 32 percent lower than the original well samples, respectively. Well MW-04 also showed the greatest variation between replicate measurements, ranging from 1,300 to 2,200 μg/l on the original sample and from 1,000 to 1,500 μg/l on the duplicate sample.

4.2 Spiked Samples

Two sets of spiked samples were prepared by WCAS for analysis of purgeable aromatics, cadmium, chromium (total and hexavalent), copper and zinc. One set of spiked samples (SP-01) was submitted to ATI as a QA/QC check. WCAS also analyzed a set (WCAS) in order to verify the spiked concentrations of their prepared samples. The results have been tabulated in Tables 4-2 and 4-3. Percent recoveries for ATI were within acceptable ranges, ranging from 75 to 115 percent for BTEX compounds, and from 90 to 104 percent for the five metals. According to Table 5-1 of the RFI Workplan, acceptable

recovery values range from 60 to 140 percent for purgeable aromatics, 85 to 120 percent for hexavalent chromium, and from 75 to 125 percent for the other four metals.

4.3 Equipment Blank and Deionized Water Samples

Two equipment blanks were collected in order to verify that cross-contamination between wells did not occur during sampling. The equipment blank was obtained by pumping deionized water through the decontaminated sample pump and lines. The samples were collected in the appropriate containers and submitted for laboratory analysis. One equipment blank was collected from each sampling pump immediately after decontamination was completed. Sample EB-01 was collected prior to sampling well MW-11, and EB-02 was collected after sampling well MW-4. Equipment blanks were submitted to the laboratory for analysis of purgeable halocarbons/aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. In addition, a sample was collected from the deionized source water used for decontamination. The DIW sample was analyzed for the parameters noted above.

Low levels (less than 10 $\mu g/l$) of purgeable halocarbon compounds were detected in both equipment blanks. Bromodichloromethane and dibromochloromethane were detected in both EB-01 and EB-02 at levels which are more than an order of magnitude higher than the detection limit. Because bromodichloromethane and dibromochloromethane were not detected in either the DIW sample or any of the monitoring well samples, the origin of this compound is enigmatic. This result does not indicate, however, a contamination problem, since it appears only in the equipment blanks. Bromoform was detected in EB-1 at less than an order of magnitude above the detection limit. Bromoform was not detected in any of the ground water samples so again its presence is puzzling but does not indicate a contamination problem. Chloroform was detected in both EB-1 and EB-2. Chloroform was not detected in the DIW sample but was detected in several of the ground water samples. Again, there is no clear explanation of the presence of chloroform in the equipment blanks. According to CDM geochemists, trace levels of chloroform in the water samples could be attributable to contact

with PVC tubing. 1,1,1-trichloroethane was detected in the DIW sample, however, the result was barely above the detection limit. This is unlikely to present a contamination problem, because this compound was not detected in either equipment blank.

Low levels of TOC and TOX were also detected (maximum concentrations of 1.2 mg/l and 24 μg/l, respectively) in both equipment blank samples. The findings are not believed to be indicative of a cross-contamination problem, but rather reflect the quality of the source DIW used to make the blanks. In addition, ATI utilized lower detection limits on both these parameters than previous analytical laboratories.

4.4 Travel Blanks

The detection of compounds in travel blanks is generally indicative of systematic contamination from sample transport, laboratory glassware cleaning, laboratory storage, or analytical procedures. For each day of sampling, one laboratory prepared travel blank consisting of organic-free water was labeled and submitted for purgeable halocarbon and aromatic volatile organic analysis by EPA Methods 601/602. Tables 4-1 and 4-2 show the results of travel blank analyses. Each travel blank was stored with the days' samples to be analyzed for volatile organic compounds. An examination of the tables reveals that no purgeable halocarbon/aromatic compounds were detected in any of the four travel blanks.

4.5 Steam Cleaner Sample

During the three sampling events prior to October 1989, a sample was collected from the steam cleaner in order to verify that the rental equipment was not a source of contamination. Steam cleaner samples were obtained from the end of the discharge nozzle and were analyzed for purgeable halocarbons/aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. An evaluation of the historical steam cleaner data verified that the rental unit was not a source of contamination. Therefore, starting with the October 1989 sampling, the collection of a steam cleaner sample for analysis was discontinued. In the event that

the quality of the water discharged from the steam cleaner during subsequent rounds is suspect, additional samples will be collected as appropriate.

4.6 Sample Control

All samples were labeled immediately prior to sampling with a waterproof pen. Samples were transported under chain-of-custody and hand delivered by CDM personnel to the laboratories in ice-cooled chests. Copies of the chain-of-custody records are included in Appendix E.

5.0 GROUND WATER ELEVATION

Prior to the initiation of well evacuation procedures, the depth to ground water was measured in each monitoring well. Ground water elevations were calculated by subtracting the depth to static water level from the surveyed elevation of the corresponding monitor well. The elevation of the ground water surface increased at each well since the previous October 1989 Quarterly Sampling. This increase ranged between 0.75 and 1.23 feet, with an average increase of 0.96 feet. During the previous October sampling, an average 3.15 foot decrease in ground water elevation was noted. As has been observed during prior sampling events, no water was detected in monitoring well MW-06A which is screened in the Gage formation.

Table 5-1 lists the depths to water and ground water elevations for each well. Figure A-2 shows the approximate ground water surface elevation of the Upper Hollydale Aquifer. The contours were drawn based on a three-point solution using wells MW-1, MW-5 and MW-6B. The elevation for deep well MW-4A was not included on the figure. An examination of the ground water elevation at each well location illustrates that the majority of the data points fall within the appropriate ground water elevation contours as drawn.

In several instances (MW-2, MW-4 and MW-8), the data points do not "fit" within the contour lines as well as would be expected. As was noted during the July and October 1989 sampling events, the value for well MW-02 once more appears to be erroneous by more than one foot. The field notes were checked and no obvious errors were found. As stated in the July and October 1989 quarterly sampling reports, apparent discrepancies could potentially be attributable to user error in measuring the water depths in wells or to an erroneous data base of casing elevations. During the October sampling, MW-8 and MW-4 were also found to not "fit" within the contour lines. At this point, expectations are that all existing wells will be resurveyed when new wells are installed during the forthcoming RCRA Facility Investigation. During the previous sampling event, the direction of ground water flow was approximately S 54° W at a gradient of 0.4 foot per 100 feet. As shown on Figure A-2 in Appendix A, the gradient has

TABLE 5-1

GROUND WATER ELEVATION DATA
JANUARY 1990 QUARTERLY SAMPLING
SOUTHERN CALIFORNIA CHEMICAL

Well No.	Well Headspace* (ppm)	Total Depth Constructed (ft)	Total Depth Measured (ft)	Casing Fill (ft)	M.P. Elevation (ft)	Depth to Water (ft)	G.W. Elevation (ft)
1	7	62.5	62.35	0.15	152.60	55.0	97.73
2	82	74.0	70.31	3.69	151.56	55.23	96.46
3	90	75.0	71.71	3.29	151.62	55.77	95.98
4	0	75.0	67.69	7.31	149.76	54.02	95.87
4A	1.2	107.0	108.30	0	152.49	56.55	96.07
5	0	75.0	73.4	1.60	153.21	58.18	95.19
6A	119	30.0	29.47	0.53	149.31	dry	dry
6B	0	77.0	74.89	2.11	149.46	53.49	96.1
7	6	75.0	74.6	0.40	149.27	53.82	95.58
8	11	71.0	70.06	0.94	149.53	53.91	95.75
9	86	77.0	73.65	3.35	151.14	54.83	96.44
10	153	75.0	74.38	0.62	151.60	55.35	96.38
11	125	75.5	74.96	0.54	152.80	56.21	96.72

NR = No Reading
M.P. = Measuring Point (well head)
G.W. = Groundwater
* = Measured with PID prior to sampling, maximum reading.

remained unchanged, however, the direction of ground water flow during the January 1990 sampling was slightly more to the south (S 37° W).

Of the 12 ground water monitoring wells completed in the Hollydale Aquifer, 10 are perforated in the approximate interval from 45 to 75 feet below ground surface. The exceptions are wells MW-01 and MW-04A which are perforated in the intervals from 42 to 62 feet and 87 to 107 feet, respectively. During the January 1989 round of sampling, the ground water elevation at well MW-04 (shallow) was a minimal 0.09 feet higher than the ground water elevation at well MW-04A (deep). In April 1989, ground water elevation at the shallow well was 0.91 feet higher than the deep well. During the July and October rounds of sampling, the ground water elevation of the deep well was 0.11 and 0.16 feet higher than the shallow well, respectively. In January 1990, the ground water elevation of the deep well was 0.20 feet higher than the shallow well. It is not known at the present time whether the increase is due to differences in well construction, measurement error, seasonal variations or other unknown factors. Subsequent measurements at the location will allow for a determination of whether the observed difference is reflective of actual conditions or other factors.

6.0 GROUND WATER QUALITY

Based upon the results of laboratory testing performed on the ground water samples collected January 1989 from the on-site monitor wells, the presence of two contaminant plumes in the Hollydale Aquifer was reaffirmed. Historically, these plumes have been present at varying concentrations and lateral extent. In January 1989, one plume consisting primarily of site-specific indicator parameters (metals), was aligned in a northeasterly direction in the vicinity of wells MW-04 and MW-09. The other, consisting of organic compounds, was similarly aligned along the northern boundary of the site property with the highest concentrations found in wells MW-03, MW-04, and MW-11.

Analytical results from the 12 wells sampled during the January 1990 quarterly monitoring have been compiled in Tables 6-1 through 6-3. As can be seen from an examination of the analytical data, significant amounts of total and hexavalent chromium and trichloroethene were detected at well MW-04 (shallow). This finding is consistent with previous rounds of sampling. In addition, a significant concentration of ethylbenzene (210 $\mu g/l$) was detected at well MW-10. The following sections will describe both metals and purgeable halocarbon/aromatics analytical results in detail.

6.1 Site-Specific Indicator Parameters

Hexavalent Chromium (Cr[VI])

Elevated levels of Cr(VI) were found to be present in MW-04 and MW-09 during the January 1989 sampling. Cr(VI) was originally detected in MW-04 at a concentration of 500 mg/l in June, 1985, and has fluctuated between 33 (January 1989 data) and 500 mg/l since. In order to compare the analytical data from the most recent sampling events (January, April, July and October 1989) with the January 1990 data, Table 6-5 was compiled. The table compares parameters of interest (hexavalent and total chromium, cadmium, zinc, purgeable aromatics and trichloroethene) at selected well locations. Wells were selected based on an evaluation of their relative position and

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Bromodichloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Bromoform	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Bromomethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Carbon Tetrachloride	< 0.20	< 0.40	28.00	< 5.00	< 0.20	52.00	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Chlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.20	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Chloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Chloroform	< 0.20	< 0.40	23.00	5.10	< 0.20	42.00	< 1.00	< 1.00	0.49	8.10	< 2.00	< 2.00
Chloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Dibromochloromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,2-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,3-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,4-Dichlorobenzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
1,1-Dichloroethane	< 0.20	< 0.40	< 2.00	72.00	< 0.20	0.42	< 1.00	2.40	29.00	60.00	9.80	5.50
1,1-Dichloroethene	0.73	< 0.40	4.00	33.00	< 0.20	< 0.40	< 1.00	< 1.00	6.60	36.00	8.40	< 2.00
1,2-Dichloroethane	0.89	< 0.40	20.00	100.00	< 0.20	2.20	< 1.00	< 1.00	0.83	3.90	80.00	28.00
1,2-Dichloropropane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
cis-1,3-Dichloropropene	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
trans-1,3-Dichloropropene	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Methylene Chloride	< 2.00	< 4.00	< 20.00	74.00	< 2.00	< 4.00	< 10.00	< 10.00	< 2.00	< 10.00	< 20.00	< 20.00
1,1,2,2-Tetrachloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Tetrachloroethene	3.10	0.54	< 5.00	< 5.00	< 0.20	< 0.40	6.40	< 1.00	1.40	2.20	< 2.00	< 2.00
1,1,1-Trichloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	0.41	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,1,2-Trichloroethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Trichloroethene	16.00	27.00	65.00	220.00	8.00	16.00	46.00	39.00	28.00	100.00	84.00	46.00
Trichlorofluoromethane	< 2.00	< 4.00	< 20.00	< 50.00	< 0.20	< 0.40	< 10.00	< 10.00	< 2.00	< 10.00	< 20.00	< 20.00
Vinyl Chloride	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
Dichlorodifluoromethane	< 0.20	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	< 0.20	< 1.00	< 2.00	< 2.00
1,2 Dichloroethane (Total)	0.35	< 0.40	< 2.00	< 5.00	< 0.20	< 0.40	< 1.00	< 1.00	4.70	1.30	< 2.00	< 2.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ATI.
< Denotes non-detection at indicated detection limit

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Ethylbenzene	< 0.50	< 1.00	110.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	210.00	83.00
Tolulene	< 0.50	< 1.00	< 5.00	< 12.00	< 0.50	< 1.00	< 2.50	< 2.50	< 0.50	< 2.50	< 5.00	< 5.00
Xylenes, Total	< 1.00	< 2.00	< 10.00	< 25.00	< 1.00	< 2.00	< 5.00	< 5.00	< 1.00	< 5.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by ATI.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
JANUARY1990 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, Hexavalent	< 0.02	< 0.02	< 0.02	109.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.28	< 0.02	< 0.02
Chromium, Total	< 0.01	< 0.01	< 0.01	95.10	< 0.01	= 0.01	< 0.01	< 0.01	< 0.01	2.20	< 0.01	< 0.01
Copper	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	0.02	= 0.01	= 0.01	= 0.01	< 0.01	= 0.01	0.02	< 0.01	= 0.01	0.02	0.02	= 0.01
Chloride	513.00	101.00	309.00	2200.00	121.00	114.00	77.10	300.00	222.00	329.00	208.00	103.00
Nitrate (Nitrogen)	4.90	6.40	1.30	0.68	6.00	6.60	9.70	6.10	4.20	5.90	0.20	0.20

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JANUARY 1990 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND (units)	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
EC 1 (umhos/cm)	2640.00	1460.00	1970.00	4340.00	1510.00	1380.00	1250.00	2150.00	1720.00	2070.00	1790.00	1530.00
EC 2 (umhos/cm)	2640.00	1470.00	1990.00	4380.00	1510.00	1380.00	1270.00	2160.00	1720.00	2080.00	1810.00	1550.00
EC 3 (umhos/cm)	2550.00	1460.00	2000.00	4360.00	1530.00	1380.00	1260.00	2170.00	1750.00	2080.00	1810.00	1560.00
EC 4 (umhos/cm)	2650.00	1470.00	2010.00	4440.00	1530.00	1370.00	1280.00	2200.00	1740.00	2090.00	1810.00	1550.00
pH 1 (lab units)	7.03	7.70	7.41	6.70	7.41	7.03	7.36	7.69	7.63	7.41	7.70	7.77
pH 2 (lab units)	6.98	7.72	7.44	6.67	7.42	7.11	7.34	7.74	7.61	7.45	7.80	7.81
pH 3 (lab units)	7.16	7.72	7.49	6.72	7.43	7.23	7.35	7.72	7.61	7.48	7.71	7.86
pH 4 (lab units)	7.27	7.78	7.46	6.67	7.47	7.16	7.39	7.74	7.68	7.47	7.81	7.78
TOC 1 (mg/l)	9.20	1.00	38.20	59.00	8.30	6.90	1.20	1.90	2.20	3.70	35.50	18.90
TOC 2 (mg/l)	8.80	1.30	38.60	59.30	4.40	6.30	1.30	1.30	2.30	4.00	36.30	20.20
TOC 3 (mg/l)	8.40	0.80	37.90	57.00	2.50	6.40	1.30	1.10	1.60	3.50	36.60	20.10
TOC 4 (mg/l)	8.40	= 0.50	37.30	59.10	1.50	6.20	0.90	1.60	2.00	3.60	35.80	20.40
TOX 1 (ug/l)	48.00	35.00	190.00	1700.00	= 8.00	160.00	57.00	37.00	69.00	220.00	190.00	83.00
TOX 2 (ug/l)	61.00	45.00	250.00	1700.00	< 8.00	140.00	62.00	44.00	78.00	220.00	190.00	88.00
TOX 3 (ug/l)	59.00	35.00	260.00	1300.00	13.00	150.00	58.00	44.00	74.00	240.00	210.00	78.00
TOX 4 (ug/l)	61.00	40.00	210.00	2200.00	13.00	140.00	59.00	38.00	81.00	170.00	220.00	74.00

< Denotes non-detection at indicated detection limit
= Denotes compound concentration is equal to the detection limits
Laboratory analysis performed by ATI.

EC = Electrical Conductivity
TOC = Total Organic Carbon
TOX = Total Organic Halide

TABLE 6-5 SELECTED WELLS/PARAMETERS COMPARISON

		METALS			PURGEABLE AROMATICS				PURG. HALOCARBONS
MONITOR WELL	Hexavalent	Total	Cadmium	Zinc	Benzene	Toluene	Ethyl-	Total	Trichloro-
No. / Date	Chromium	Chromium					benzene	Xylenes	ethene
MW - 1									
Jan-89	ND	0.014	ND	0.015	ND	ND	ND	ND	19
Apr-89	ND	0.1	ND	ND	ND	ND	ND	3	23
Jul-89	ND	0.06	0.01	0.06	ND	ND	ND	ND	13
Oct-89	ND	ND	ND	0.11	ND	ND	ND	ND	12
Jan-90	ND	ND	ND	0.02	ND	ND	ND	ND	16
MW - 2									
Jan-89	0.017	0.022	ND	ND	ND	ND	ND	ND	60
Apr-89	ND	0.05	ND	ND	ND	ND	ND	ND	45
Jul-89	ND	0.06	ND	0.04	ND	ND	ND	ND	67
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	35
Jan-90	ND	ND	ND	0.01	ND	ND	ND	ND	27
MW - 3									
Jan-89	ND	ND	ND	ND	7.4	17	4900	1500	74
Apr-89	ND	0.07	ND	ND	ND	ND	1200	60	110
Jul-89	ND	0.06	ND	0.2	ND	ND	ND	ND	120
Oct-89	ND	ND	ND	ND	<50	<100	1600	150	<100
Jan-90	ND	ND	ND	0.01	ND	ND	110	ND	65
MW - 4									
Jan-89	33	400	0.028	0.007	ND	10	15	29	120
Apr-89	43	100	0.05	ND	ND	23	15	50	280
Jul-89	120	98	0.08	0.09	ND	ND	140	40	290
Oct-89	110	120	0.07	0.04	ND	ND	ND	ND	250
Jan-90	109	95.1	0.12	0.01	ND	ND	ND	ND	220
MW - 7									
Jan-89	ND	ND	ND	ND	ND	1.4	1.2	3.6	35
Apr-89	ND	0.02	ND	ND	ND	ND	ND	1	47
Jul-89	ND	0.03	ND	ND	ND	ND	ND	ND	25
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	44
Jan-90	ND	ND	ND	ND	ND	ND	ND	ND	39
MW - 9									
Jan-89	0.45	0.33	ND	0.008	ND	ND	ND	ND	55
Apr-89	ND	0.06	ND	ND	ND	ND	ND	ND	24
Jul-89	ND	0.17	ND	0.08	ND	ND	ND	ND	57
Oct-89	2.5	1.8	ND	ND	ND	ND	ND	ND	110
Jan-90	2.28	2.2	ND	0.02	ND	ND	ND	ND	100
MW - 11									
Jan-89	ND	ND	ND	ND	ND	ND	43	1.5	34
Apr-89	ND	0.04	ND	ND	ND	7500	2600	11000	39
Jul-89	ND	ND	ND	0.05	ND	ND	ND	90	29
Oct-89	ND	ND	ND	ND	ND	ND	200	ND	35
Jan-90	ND	ND	ND	0.01	ND	ND	83	ND	46

NOTE: Concentrations reported in mg/l for all metals and ug/l for purgeable aromatics/halocarbons.

past indications of contamination. Well MW-1 was selected because of its upgradient location. Wells MW-2, MW-3 and MW-11 were selected because of their position along the northern border of the site and significant past detections of purgeable aromatic compounds. Well MW-4 was included in the comparison because it historically yields the highest chromium concentrations. Well MW-9 was selected because of its location downgradient from the former chromic acid underground storage tank. Well MW-7 was chosen because of its position adjacent to the ferric chloride area.

During the January and April 1989 sampling events, the concentration of Cr(VI) in MW-04 had significantly decreased since the September 1988 sampling when it was detected at 170 mg/l. During the July 1989 sampling, the concentration increased significantly to 120 mg/l. At the present time, its concentration has remained fairly stable at 110 mg/l in October 1989 and at 109 mg/l in January 1990. In September 1986, Cr(VI) in MW-09 was detected at a concentration of 0.05 mg/l, with fluctuations between non-detected and 2.50 mg/l since. During the April and July 1989 sampling, it was not detected at a method detection limit of 0.05 mg/l. Cr(VI) was detected, however, during the October 1989 sampling at a concentration of 2.5 mg/l, and in January 1990 at 2.28 mg/l. It should be noted that the water discharged from well MW-09 in October 1989 and in January 1990, was slightly greenish yellow in color. The discoloration did not change significantly during the evacuation of three saturated casing volumes of water from the well during October 1989 or January 1990 (40 and 36 gallons, respectively). The October 1989 sampling event was the first time discoloration typical of chromium contamination was observed by CDM sampling team members in an on-site well other than well MW-04. It was not detected in any of the remaining monitoring wells above the method detection limit of 0.05 mg/l in April, July or October 1989, or in January 1990. Figure A-3 in Appendix A shows the concentration of Cr(VI) detected at wells MW-4 and MW-9 during the January 1990 sampling.

Total Chromium (Cr[T])

Historically, Cr(T) has been present at elevated concentrations in ground water samples collected from monitoring wells MW-04 and MW-09. Cr(T) was

initially detected in MW-04 at a concentration of 500 mg/l in June 1985, with fluctuations between 61 and 550 mg/l since. Cr(T) was initially detected in MW-09 at a concentration of 0.12 mg/l in June 1987, with fluctuations between 0.06 and 2.75 mg/l (September 1988) since. The most recent analytical results from the January 1990 sampling event show that the concentration of Cr(T) has decreased slightly at MW-4 and increased slightly at MW-9.

The July analytical data showed that, with the exception of well MW-11, Cr(T) was detected in all on-site wells. During the October 1989 and January 1990 sampling events, Cr(T) was detected only in wells MW-4 and MW-9. Figure A-4 shows the concentrations of Cr(T) detected during the January 1990 sampling.

In previous reports (February 1988, June 1988) Kleinfelder attributed the apparent rise in Cr(T) concentrations after February 1988 to a change in sample preparation, and not a change in ground water quality. Brown & Caldwell, the laboratory that Kleinfelder selected as their analytical laboratory prior to February 1988, used a modification of EPA Method 3010 sample preparation in which the sample was not mixed prior to analysis. CRL, the laboratory that Kleinfelder selected as their analytical laboratory beginning in February 1988, prepared samples in strict accordance with EPA Method 3010. This method requires that samples are well-mixed, keeping all solids in suspension prior to removal of the sample from the sample container. It was believed that this mixing of the sample yielded Cr(T) concentrations that included suspended sediments. Hence, Kleinfelder began in May 1988, the practice of field filtering the ground water samples to be analyzed for metals through a 0.45-micron screen. All samples collected for metals analyses during the January 1990 sampling were filtered in the field using a sterile 0.45-micron filter.

It is interesting to note that during the April 1989 sampling, total chromium was detected in all 12 monitor well samples. During the July 1989 sampling, it was detected in 11 of the 12 on-site wells. During the October 1989 and January 1990 sampling, it was detected only in wells MW-4 and MW-9. A federal MCL (maximum contamination limit) for chromium has

been established at 0.05 mg/l. The fact that total chromium has historically been detected in the upgradient wells MW-01 and MW-02 and in the other ten on-site wells, could be indicative of a regional ground water contamination problem.

Total chromium has consistently been detected in well MW-4 since the inception of ground water monitoring in 1985, and first appeared in 1987 and 1988 at other well locations. Based on a review of the available data, it cannot be established at the present time whether a regional problem does exist. This issue should be resolved during subsequent ground water sampling at the site.

It should be noted that the reported total chromium concentrations for wells MW-04 (monitor well and duplicate samples) and MW-09 were less than the concentrations of hexavalent chromium reported for those samples. The detection of less total chromium than hexavalent chromium has been a recurring analytical problem with previous laboratories, and is considered a minor analytical quality assurance problem. During the next round of sampling and analysis, the laboratory will be informed of this potential problem.

Cadmium (Cd)

Prior to the July 1989 sampling, cadmium had only been detected in ground water samples collected from monitoring well MW-04. Cadmium was initially detected in MW-04 at a concentration 0.78 mg/l in June 1985 with fluctuations between non-detection and 0.92 mg/l (July 1985) since. The concentration of cadmium had increased slightly at well MW-04 during the first three quarters of 1989. The concentration of cadmium at MW-04 rose from 0.07 mg/l in October 1989 to 0.12 mg/l in January 1990. During the July 1989 sampling cadmium was also detected for the first time, (0.01 mg/l) in well MW-01 at the method detection limit, but it has not been detected since. A federal MCL of 0.010 mg/l has been established for cadmium. Figure A-5 shows the concentration of cadmium which was detected at well MW-04 during the January 1990 sampling.

Zinc (Zn)

Isolated detections of zinc in ground water have occurred in samples from each well since the inception of the quarterly ground water monitoring program. Concentrations have ranged from non-detections at less than 0.001 mg/l to 0.35 mg/l. The most consistent detections have occurred in ground water samples collected from monitoring well MW-01. The concentration of zinc in MW-01 decreased from 0.08 mg/l in September 1988 to 0.015 mg/l in January 1989. During the October 1989 sampling, zinc was detected in the well at a concentration of 0.11 mg/l. Zinc was detected at MW-01 at a concentration of 0.02 mg/l during the January 1990 sampling. At these low levels, the occurrence of zinc does not appear to be of significant concern. A federal MCL of 5.0 mg/l has been established for zinc. Figure A-6 shows that zinc was detected above the detection limit of 0.01 in wells MW-1, MW-06B, MW-9, and MW-10 during the January 1990 sampling.

6.2 Organic Compounds

Reportedly, organic chemicals have not historically been used on-site in any of the production processes by SCC. Two 10,000 gallon underground storage tanks (diesel and gasoline), however, were located in the approximate center of the facility, due east of the drum wash area. During tank removal operations in July 1989, petroleum hydrocarbon contamination was discovered in the tank excavation. SCC is in the process of investigating the extent of contamination. Historically, organic compounds have been detected in ground water underlying the facility in the Hollydale aquifer, varying in both concentration and lateral extent. The primary organic compounds of concern are the purgeable aromatic compounds and the chlorinated solvent trichloroethylene (TCE), and various forms of dichloroethane and dichloroethene. The individual compounds and the concentrations they have been detected at will be discussed in the following paragraphs.

Ethylbenzene

During the January 1989 sampling, ethylbenzene was detected in wells MW-03, -4, -7, -10 and -11 at concentrations of 4,900, 15, 1.2, 0.54 and 43 μg/l,

respectively. The April 1989 analytical results revealed that the concentration at MW-04 remained the same, while concentrations decreased at MW-03 and increased significantly at MW-11. Ethylbenzene was not detected in the remaining nine wells. During the July 1989 sampling event, ethylbenzene was detected in well MW-4 at a concentration of 140 $\mu g/l$, a significant increase from the previous two rounds. Ethylbenzene was not detected in the remaining 11 wells. During the October 1989 sampling, it was detected in wells MW-3, MW-10 and MW-11 at concentrations of 1600, 190 and 200 $\mu g/l$, respectively. During the January 1990 sampling, ethylbenzene was again detected in wells MW-3, MW-10 and MW-11 at concentrations of 110, 210, and 83 $\mu g/l$, respectively. These data clearly indicate the presence of an ethylbenzene plume in the northwest corner of the facility. As can be seen by an examination of Table 6-4, significant concentrations of ethylbenzene have been detected at well MW-3 during three of the last five sampling events. Concentrations from the January 1990 sampling are illustrated in Figure A-7 of Appendix A.

Total Xylenes

During the January 1989 sampling, total xylenes were detected in wells MW-03, -4, -4A, -7, -8, and -11, at concentrations of 1,500, 29, 1.3, 3.6, 1.6 and 1.5 $\mu g/l$, respectively. The April 1989 analytical results revealed that xylene concentrations decreased in wells MW-03 and -7 to 60 and 1.0 $\mu g/l$, respectively, and were not detected at all in wells MW-4A and -8. Concentrations increased significantly at well MW-11 and increased slightly to 50 $\mu g/l$ at well MW-4. Total xylenes were not detected in the remaining six wells. During the July 1989 sampling, total xylenes were detected only in wells MW-4, -10 and -11 at concentrations of 40, 30 and 90 $\mu g/l$, respectively. During the October 1989 sampling, xylenes were detected at a concentration of 150 $\mu g/l$ only in well MW-3. Xylenes were not detected in any of the wells during the January 1990 sampling. Non-detections from the January 1990 sampling are illustrated in Figure A-8 of Appendix A.

Toluene

Toluene was detected during the January 1989 sampling at wells MW-03, -4, and -7, at concentrations of 17, 10 and 1.4 $\mu g/l$, respectively. The April

1989 analytical results revealed that the concentrations at wells MW-03 and -7 declined to nondetectable levels, while the concentration at MW-4 increased slightly to 23 $\mu g/l$. Toluene was not detected at well MW-11 in January 1989, however, during the April 1989 sampling a significant concentration was found. During the July and October 1989, and the January 1990 sampling events, toluene was not detected in any of the 12 on-site wells. Non-detections from the January 1990 sampling are illustrated in Figure A-9 of Appendix A.

Benzene

The appearance of benzene, a known carcinogen, has been very erratic throughout the course of the ground water monitoring program. Benzene has never been detected in wells MW-01, -2, -6B, -8, -9 and -10. In most cases where benzene has historically been detected, reported values have ranged from not detected to a maximum of 20 $\mu g/l$. During the January 1989 sampling event, benzene was detected in wells MW-03 and -5 at concentrations of 7.4 and 0.9 $\mu g/l$, respectively. Benzene was not detected in any of the 12 wells during the April or July 1989 sampling events. During the October 1989 sampling, it was detected at a concentration of 0.06 $\mu g/l$ (slightly above the 0.05 $\mu g/l$ detection limit) in well MW-5. Benzene was not detected in any of the wells during the January 1990 sampling event. Non-detections from the January 1990 sampling are illustrated in Figure A-10 of Appendix A.

Trichloroethylene

As illustrated in Figure A-11 of Appendix A, trichloroethylene (TCE) was detected in all 12 of the ground water monitoring wells in January 1990. During the October 1989 sampling event, TCE was detected in 11 of the 12 ground water monitoring wells. Because of the increased detection limit (100 $\mu g/l$) was not detected in well MW-03. During the January, April and July 1989 quarterly sampling events, TCE was also found in all 12 on-site ground water monitoring wells. TCE concentrations in January 1989 ranged from a high of 120 $\mu g/l$ in the shallow well at MW-04 to a low of 6.7 $\mu g/l$ in the deep well at that location. In April 1989, the concentrations at

those locations ranged from a high of 280 to a low of 7 µg/l, respectively. In July and October 1989, the concentrations were comparable, ranging from a high of 290 and 250 to a low of 5 and 3 µg/l, respectively, at those locations. In January 1990 the concentrations of the deep and shallow wells at MW-04 were 220 and 8 µg/l, respectively. Numerous other purgeable halocarbon compounds were also detected in several of the on-site wells at concentrations ranging from 0.35 to 100 µg/l during the January 1990 sampling. Various forms of dichloroethane and dichloroethene, degradation products of trichloroethane and trichloroethene, were the more common of the other constituents detected.

As was the case with total chromium, the detection of TCE at all locations could be indicative of a regional ground water purgeable organic contamination problem. At the present time, it cannot be stated with absolute certainty that a regional problem exists. A review of the analytical results contained in Appendix B reveals that, with minor exceptions, TCE has historically been detected in all on-site monitor wells, including upgradient wells. It would seem that the problem exists well beyond the boundaries of the subject facility. Subsequent ground water sampling, possibly in conjunction with a review of available literature for the surrounding area, should allow for resolution of this issue.

7.0 ASSESSMENT QUARTERLY GROUND WATER MONITORING PROGRAM STATUS

To date, CDM has implemented the field sampling protocols outlined in the unapproved Kleinfelder QAPP with minor modification. CDM has also submitted for regulatory approval a Sampling and Analysis Plan, a Quality Assurance/ Quality Control Plan, a Health and Safety Plan, and a Data Management Plan as components of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Workplan promulgated by an Administrative Order on Consent, dated December 8, 1988 by EPA. When the RFI Workplan is granted final approval, subsequent quarterly ground water sampling programs will follow the specifications and procedures which are contained therein. CDM offers no warranty, expressed or implied, as to the adequacy, accurateness, or appropriateness of the unapproved Kleinfelder QAPP. This document was used as guidance simply on the basis of it being the status quo guidance document for quarterly sampling procedures at SCC in lieu of following procedures outlined in a document approved for the purposes of conducting the pending RCRA Facility Investigation.

8.0 REFERENCES

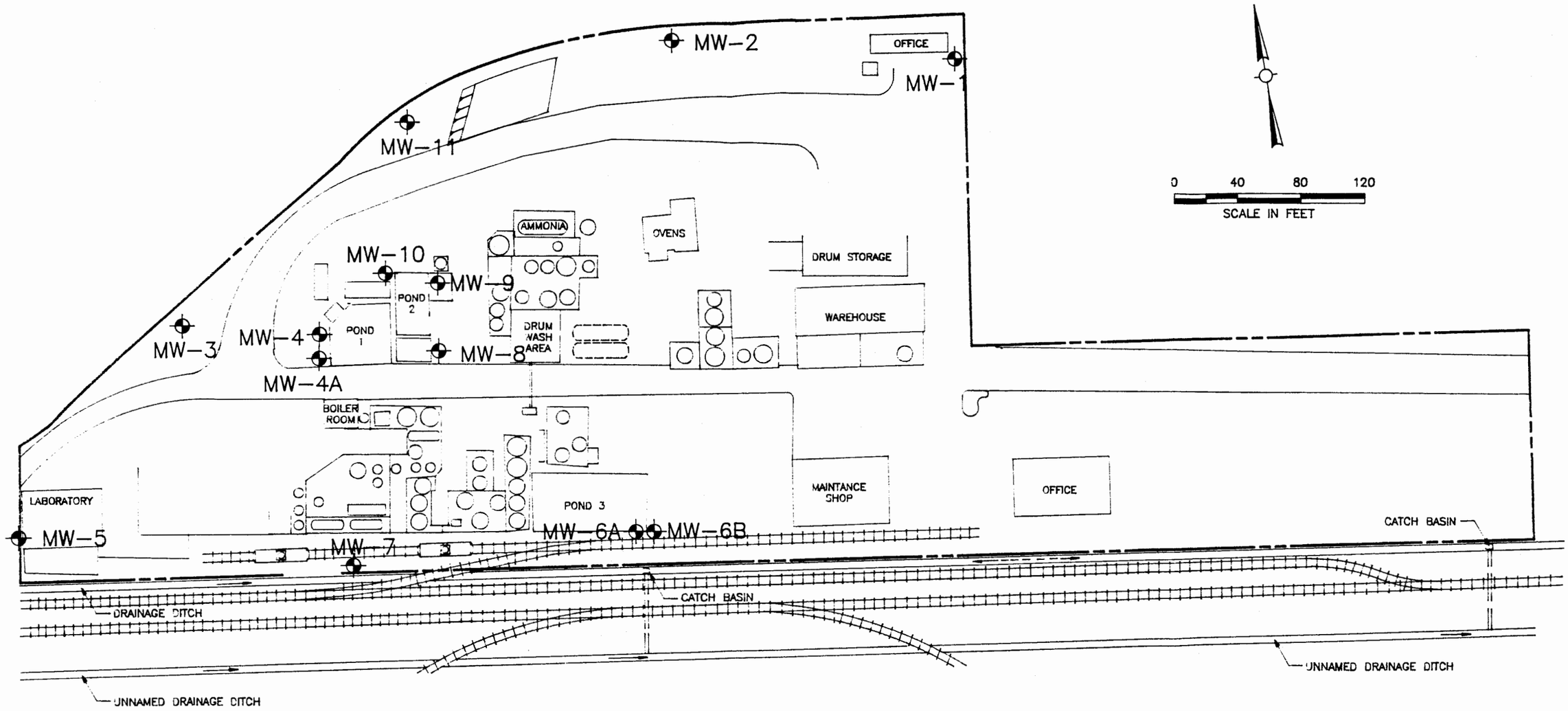
Camp Dresser & McKee Inc., RCRA Facility Investigation Work Plan, Southern California Chemical, November 28, 1989.

Camp Dresser & McKee Inc., Current Conditions Report, Southern California Chemical, November 1989.

J.H. Kleinfelder & Associates, Quality Assurance Project Plan, Southern California Chemical, May 1988.

APPENDIX A

FIGURES



LEGEND

APPROXIMATE MONITORING WELL LOCATION

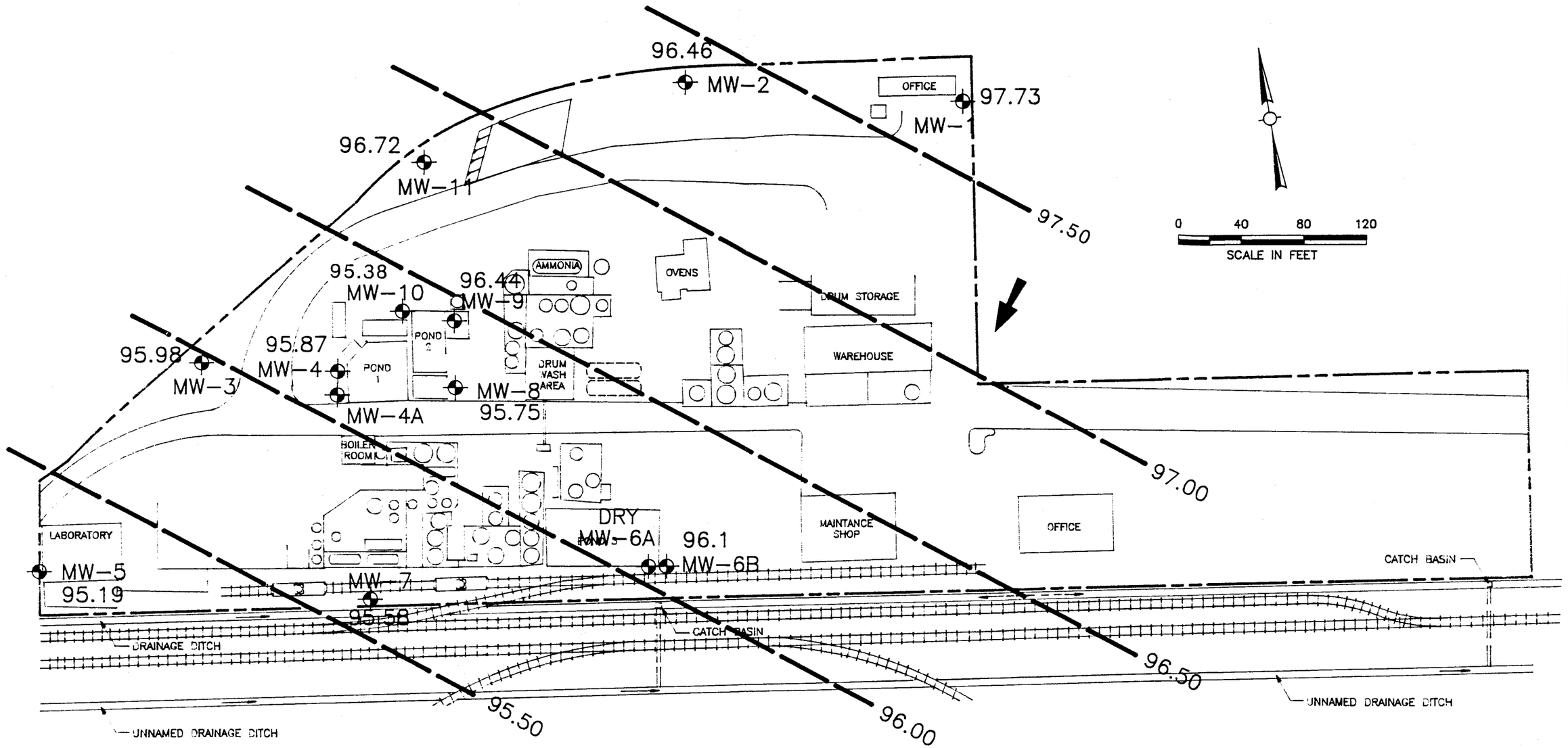
Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

MONITORING WELL LOCATION MAP

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-1



LEGEND

- APPROXIMATE MONITORING WELL LOCATION
- 95 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR (FEET MSL)
- GENERAL DIRECTION OF GROUND WATER FLOW

NOTE:
CONTOURS BASED ON THREE-POINT SOLUTION USING WELLS MW-1, MW-5 AND MW-6B.

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

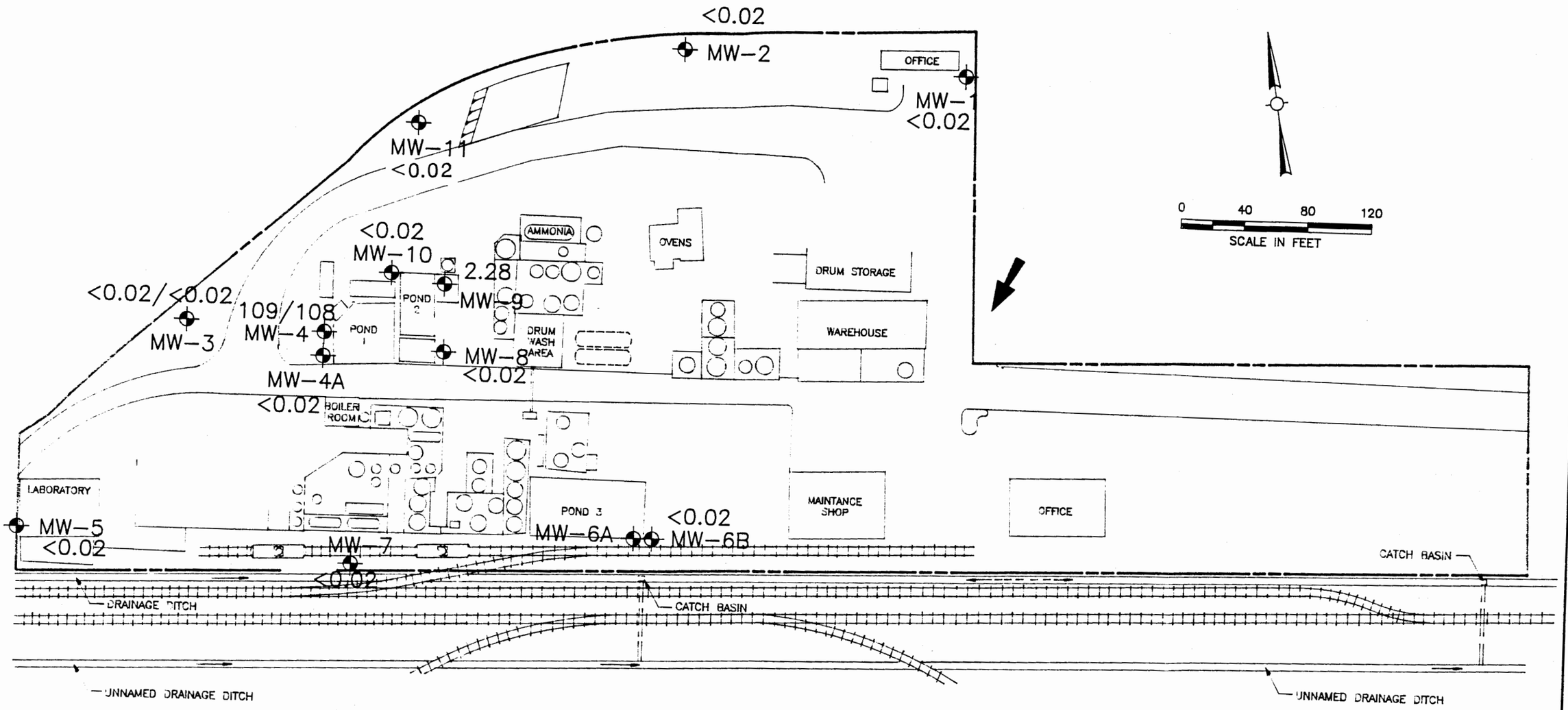
SOUTHERN CALIFORNIA CHEMICAL

GROUND WATER ELEVATION
HOLLYDALE AQUIFER

JANUARY 1990

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-2



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF HEXAVALENT CHROMIUM IN GROUND WATER

JANUARY 1990

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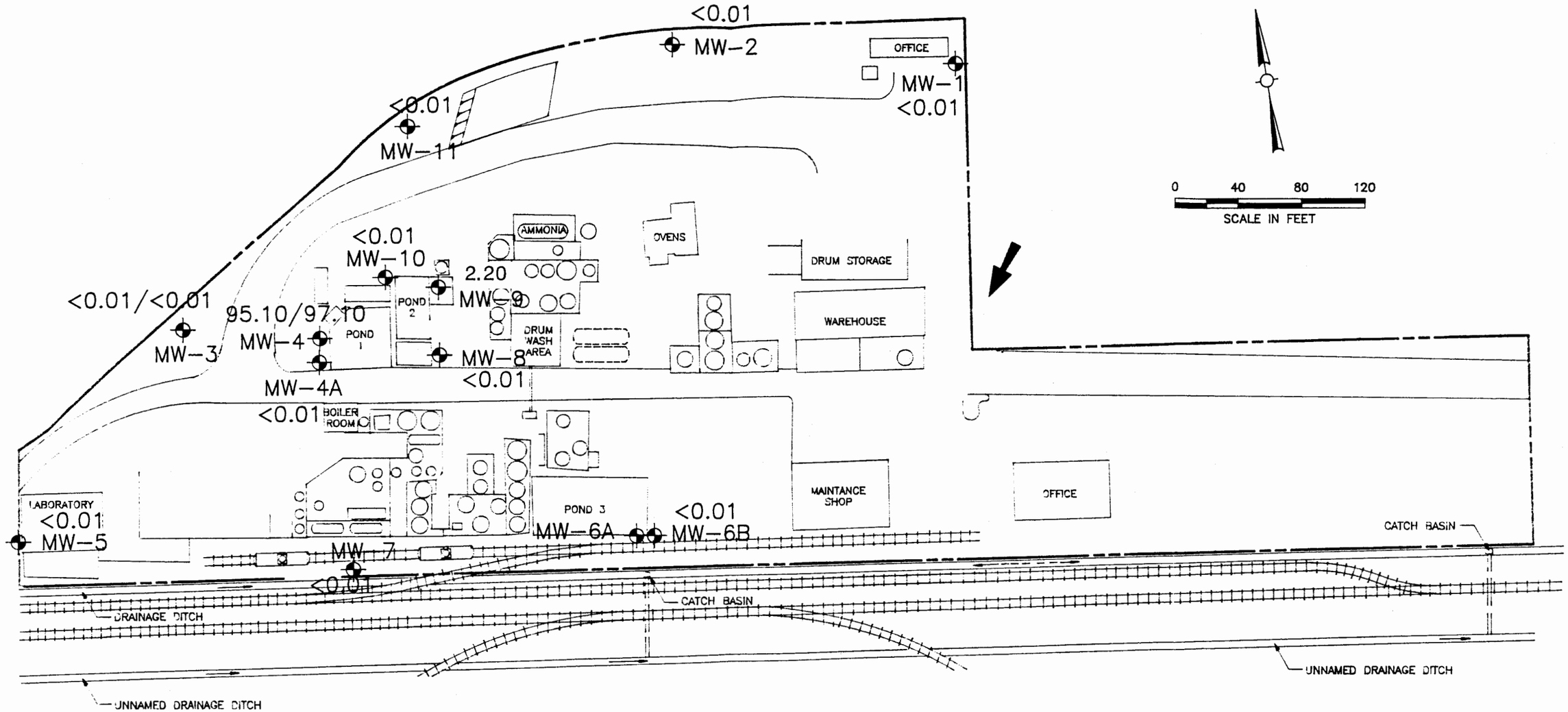
FIGURE A-3



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

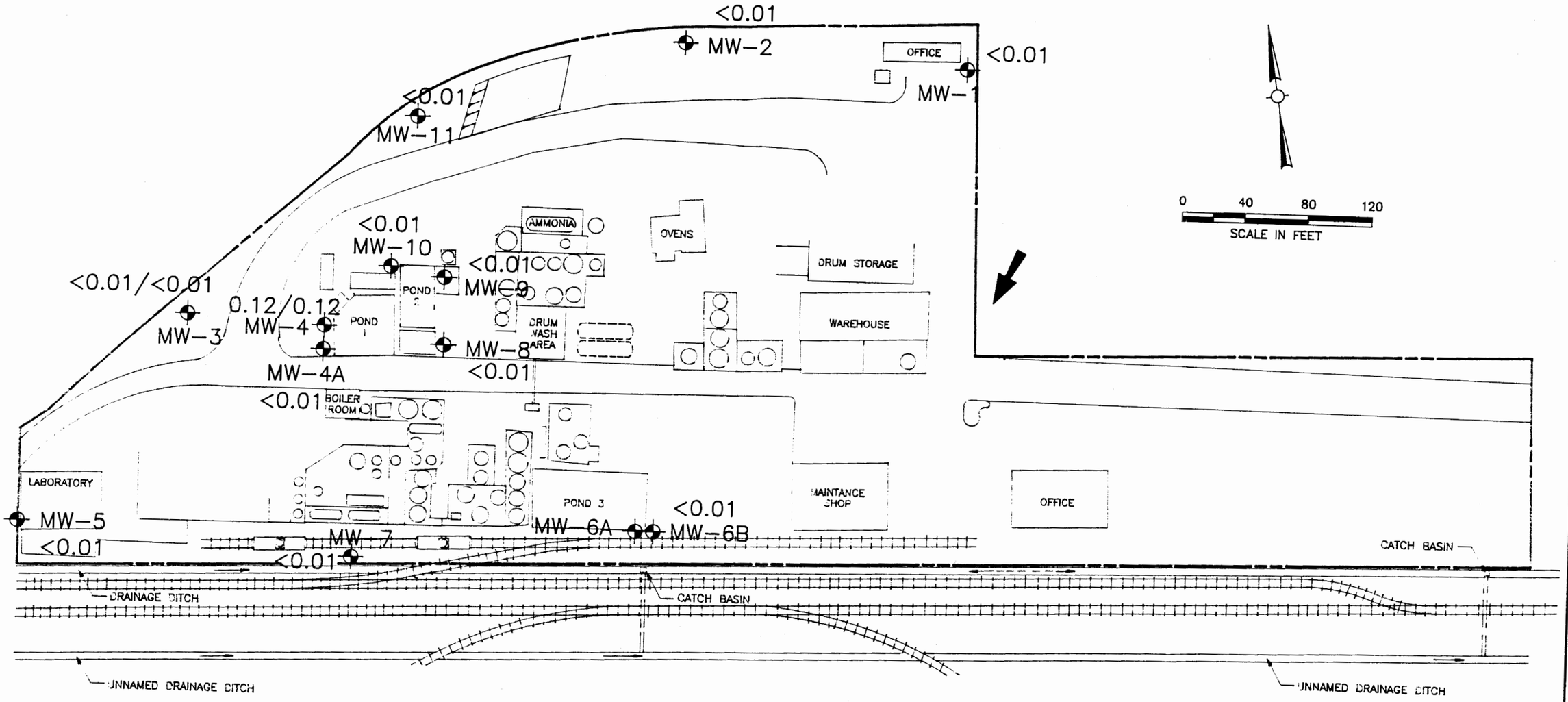
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL
CHROMIUM IN GROUND WATER

JANUARY 1990

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-4



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF CADMIUM
IN GROUND WATER

JANUARY 1990

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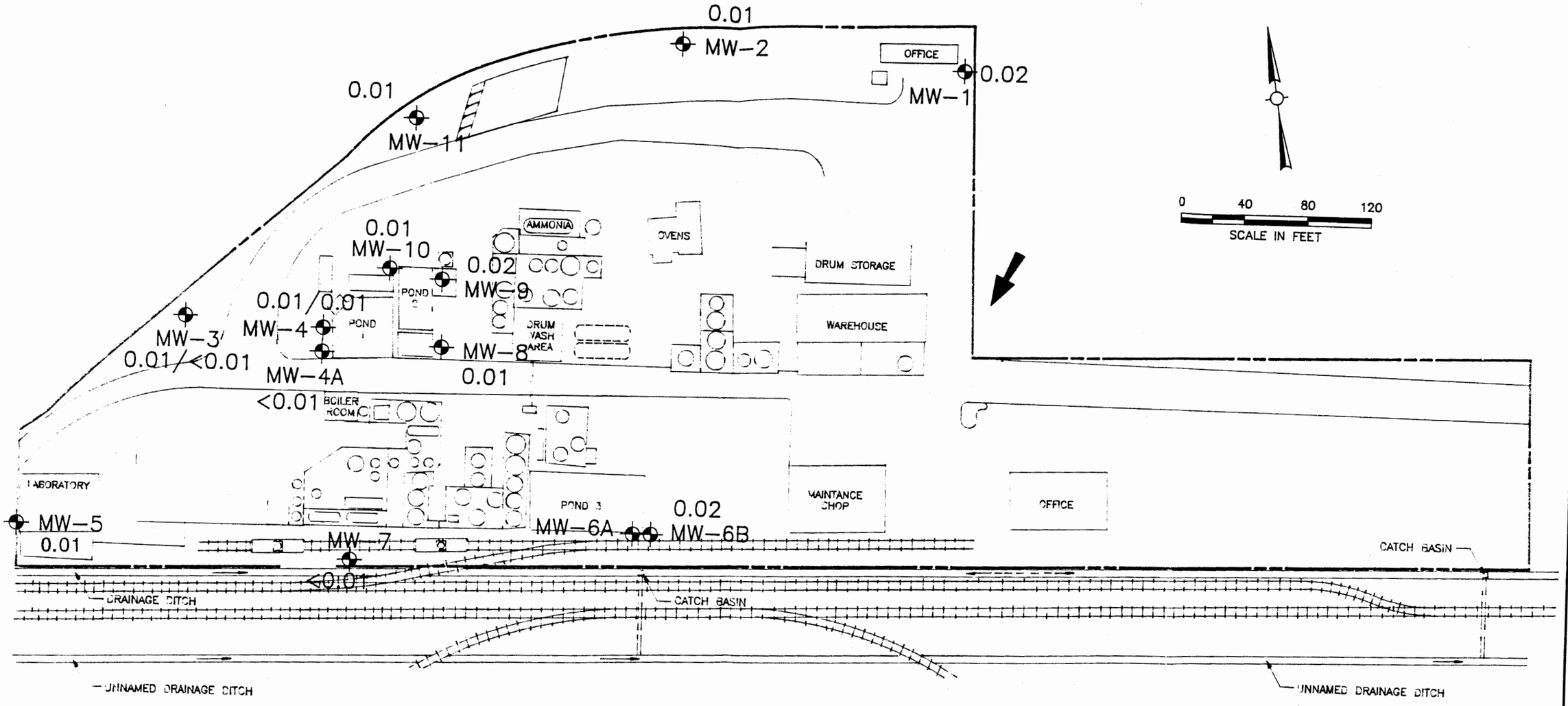
FIGURE A-5



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF ZINC
IN GROUND WATER

JANUARY 1990

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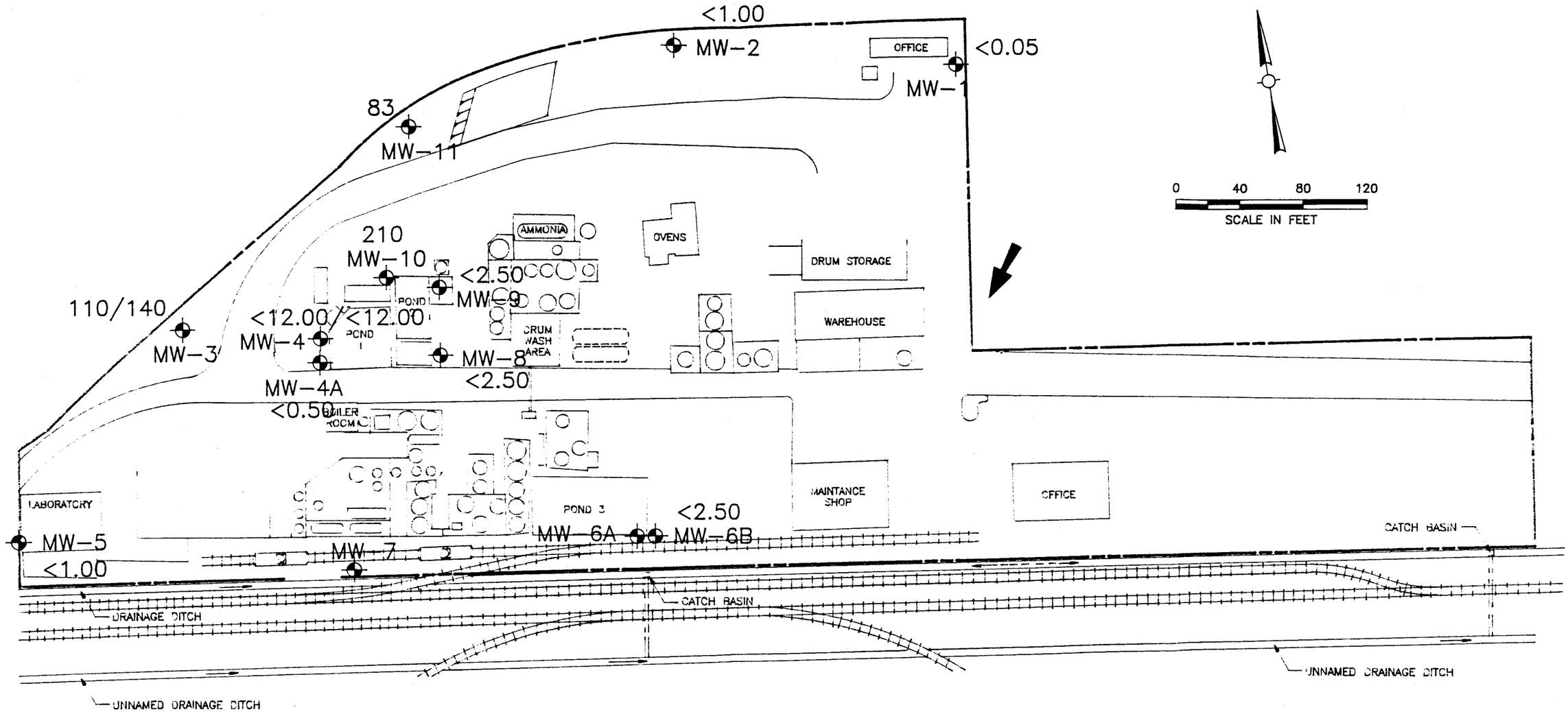
FIGURE A-6



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF ETHYLBENZENE
IN GROUND WATER

JANUARY 1990

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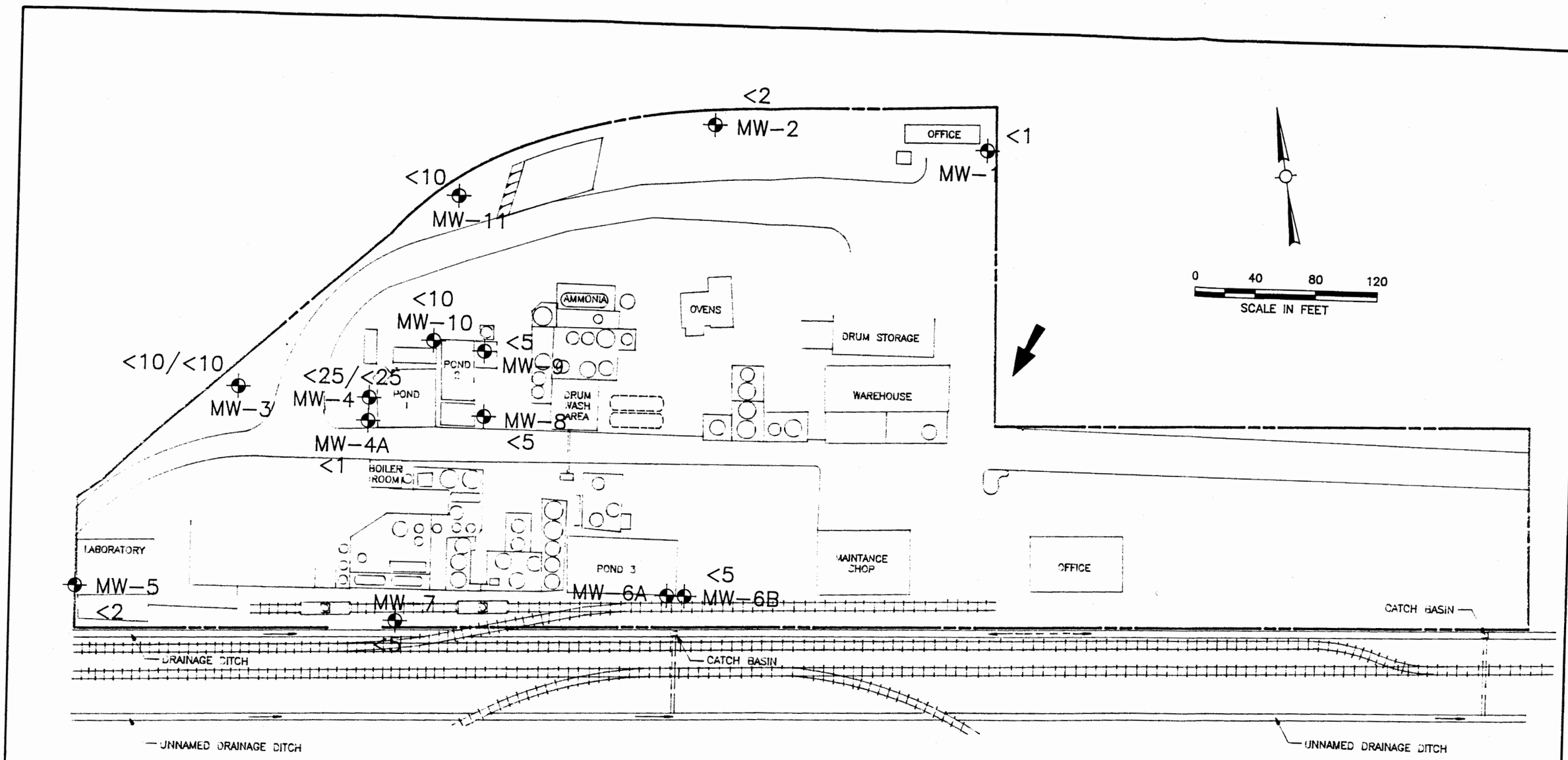
FIGURE A-7



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

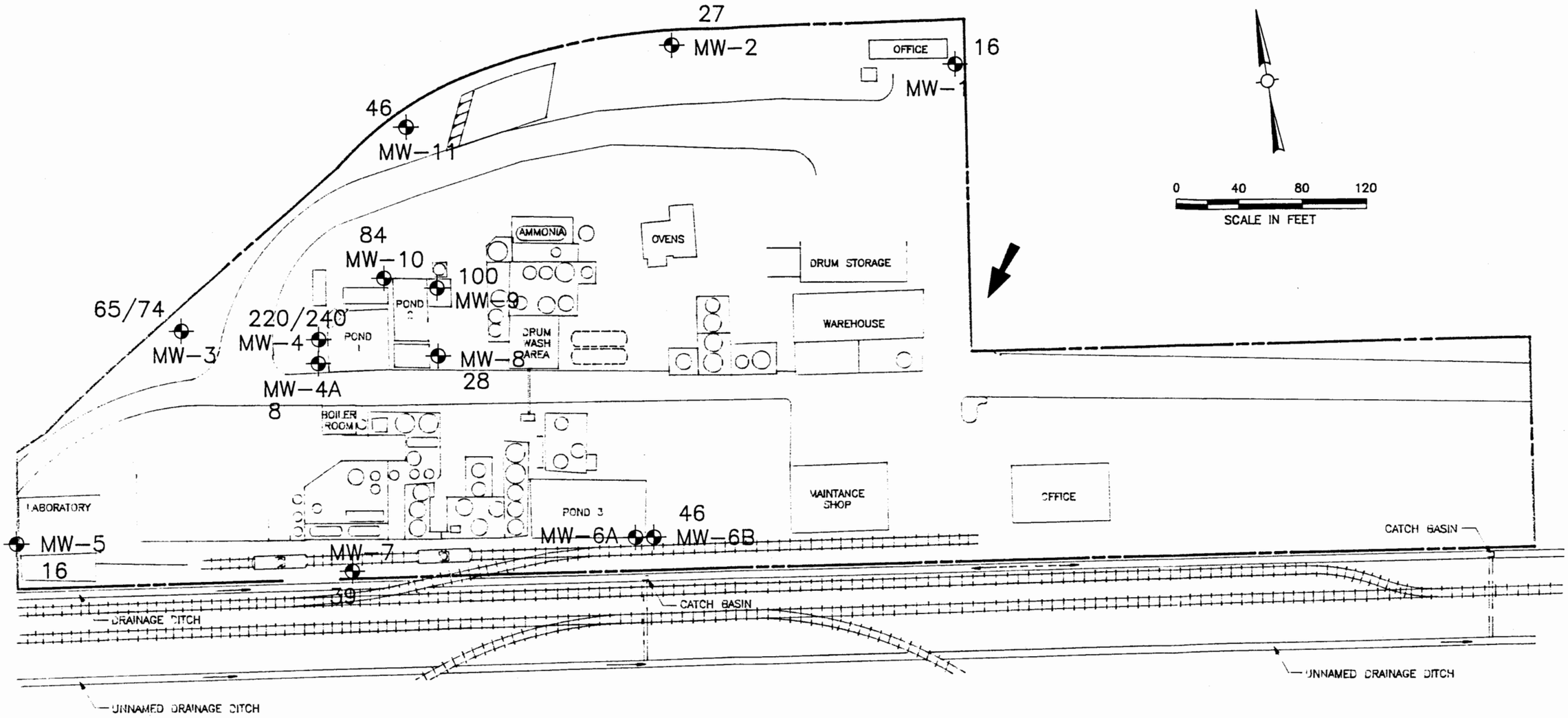
SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL XYLENES
IN GROUND WATER

JANUARY 1990

environmental engineers, scientists, planners, & management consultants **CDM**

FIGURE A-8



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TRICHLOROETHENE
IN GROUND WATER

JANUARY 1990

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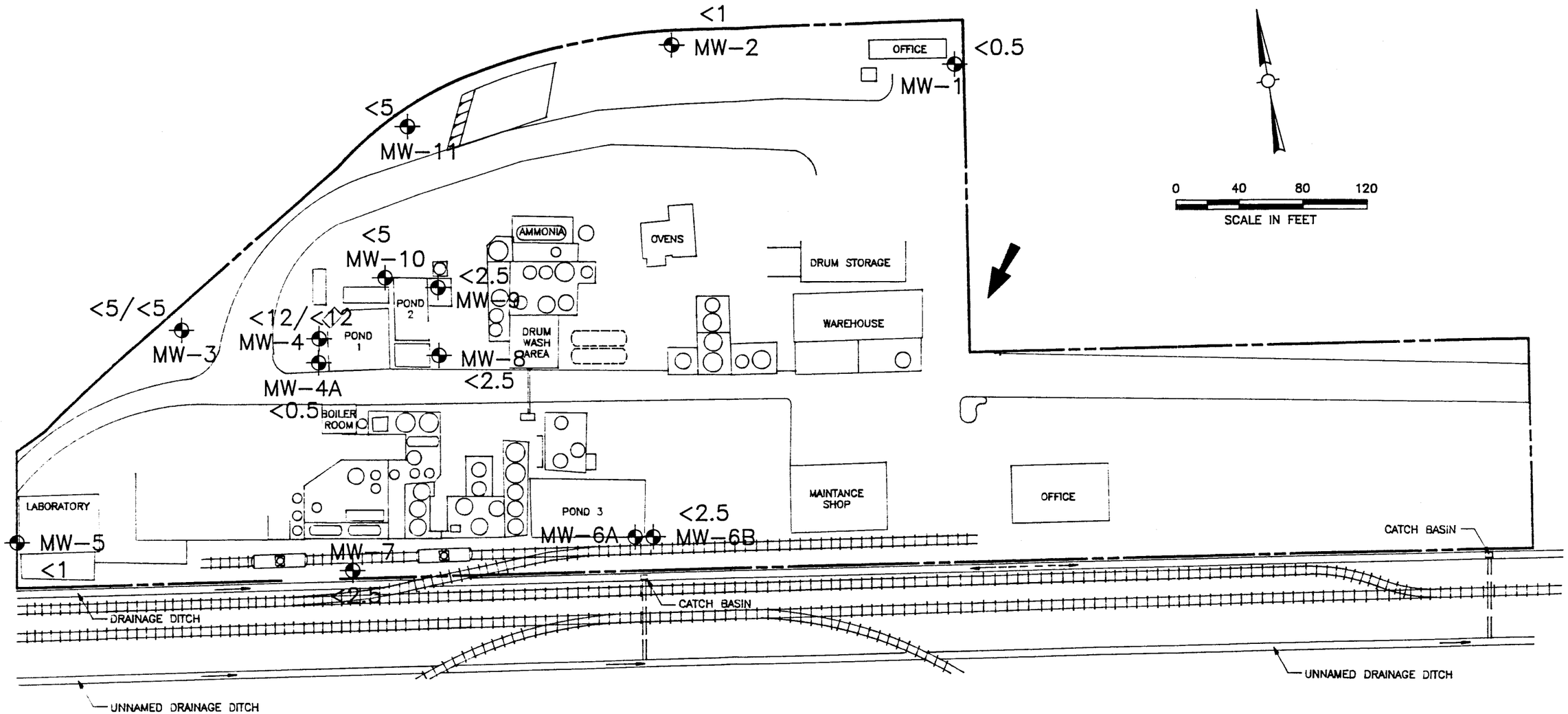
FIGURE A-11



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF BENZENE
IN GROUND WATER

JANUARY 1990

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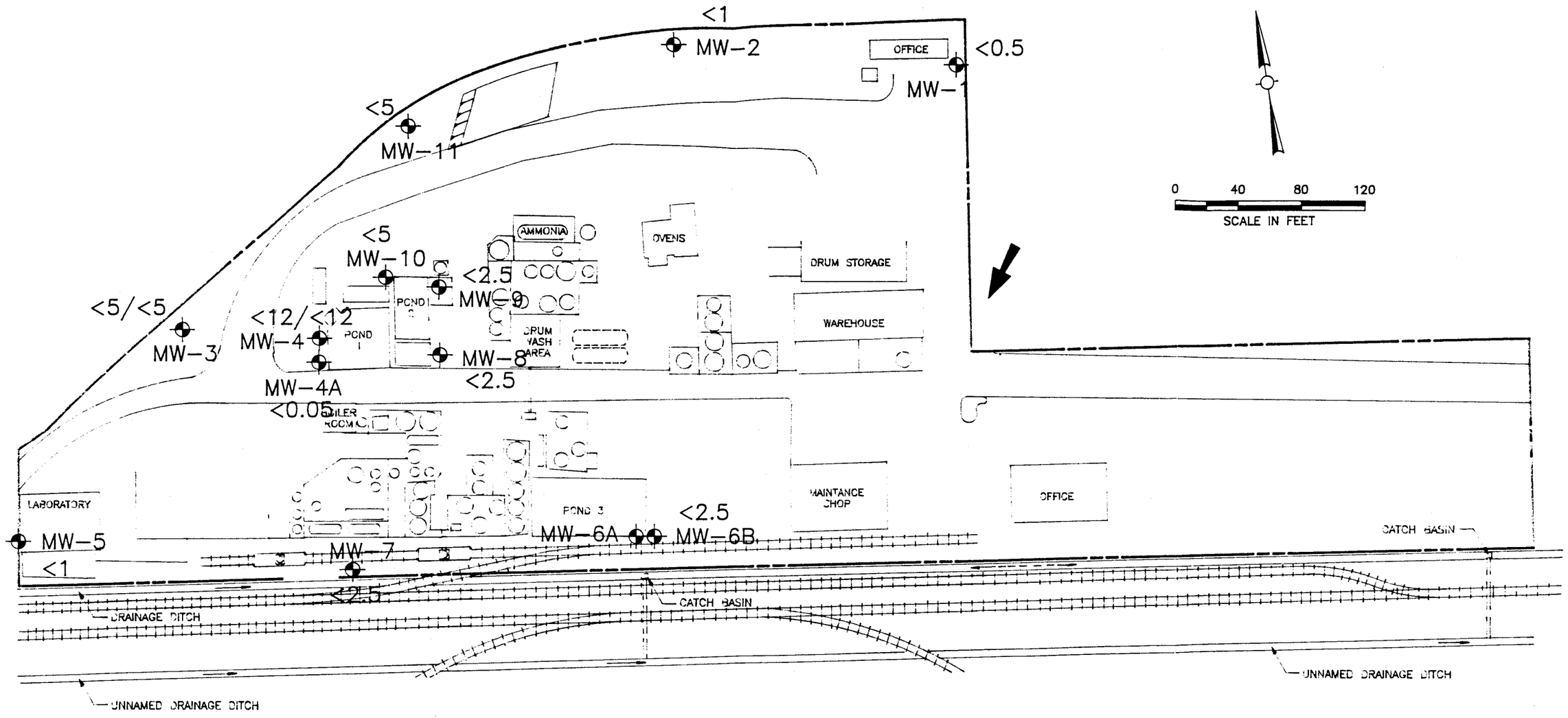
FIGURE A-10



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◀	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOLUENE
IN GROUND WATER

JANUARY 1990

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FIGURE A-9

APPENDIX B

HISTORIC GROUND WATER ANALYSES DATA

October 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03 *	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromomethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Vinyl Chloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Chloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Methylene Chloride	< 1.00	< 1.00	< 100.00	30.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00	< 10.00	< 10.00
Trichlorofluoromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1-Dichloroethene	< 1.00	< 1.00	< 100.00	60.00	< 1.00	< 1.00	< 1.00	< 1.00	4.00	40.00	< 10.00	< 10.00
1,1-Dichloroethane	< 1.00	< 1.00	< 100.00	100.00	< 1.00	10.00	< 1.00	4.00	40.00	90.00	< 10.00	< 10.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 100.00	20.00	< 1.00	< 1.00	< 1.00	2.00	8.00	< 10.00	< 10.00	< 10.00
Chloroform	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	31.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloroethane	< 1.00	< 1.00	< 100.00	70.00	< 1.00	10.00	< 1.00	< 1.00	< 1.00	< 10.00	50.00	70.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	= 10.00	< 10.00
Carbon Tetrachloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	39.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromodichloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloropropane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Trichloroethene	12.00	35.00	< 100.00	250.00	3.00	15.00	29.00	44.00	22.00	110.00	70.00	35.00
Dibromochloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromoform	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Tetrachloroethene	3.00	2.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	3.00	= 1.00	< 10.00	< 10.00	< 10.00
1,1,2,2-Tetrachloroethane	NR	NR	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	NR	NR	< 10.00	< 10.00	< 10.00
Chlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by Enseco.
< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit
* Higher detection limits due to sample matrix
NR=Not Reported, compound coelutes with Tetrachloroethene and is combined with that result.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.50	< 0.50	< 50.00	< 5.00	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 5.00	< 5.00
Toluene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	1600.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	190.00	200.00
Xylenes, Total	< 1.00	< 1.00	150.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	110.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.50	< 0.05	< 0.05
Chromium, Total	< 0.02	< 0.02	< 0.02	120.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.80	< 0.02	< 0.02
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Zinc	0.11	< 0.02	< 0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chloride	710.00	100.00	470.00	1400.00	110.00	120.00	75.00	550.00	160.00	520.00	230.00	110.00
Nitrate (Nitrogen)	3.30	6.50	1.90	0.60	4.40	4.20	7.80	4.70	4.90	6.80	0.20	1.10

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

July 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromomethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Vinyl Chloride	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Methylene Chloride	< 1.00	1.00	20.00	170.00	2.70	< 1.00	< 1.00	< 1.00	1.00	3.00	38.00	1.00
Trichlorofluoromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1-Dichloroethene	< 1.00	< 1.00	< 10.00	50.00	< 1.00	2.00	1.00	1.00	14.00	14.00	15.00	2.00
1,1-Dichloroethane	< 1.00	< 1.00	< 10.00	80.00	< 1.00	4.00	< 1.00	15.00	74.00	28.00	12.00	4.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	3.00	15.00	< 3.00	< 10.00	< 1.00
Chloroform	< 1.00	< 1.00	33.00	< 20.00	< 1.00	57.00	< 1.00	< 1.00	3.00	< 4.00	< 10.00	< 1.00
1,2-Dichloroethane	< 1.00	< 1.00	< 10.00	120.00	< 1.00	< 1.00	< 1.00	< 1.00	10.00	37.00	150.00	7.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 4.00	< 10.00	< 1.00
Carbon Tetrachloride	< 1.00	< 1.00	< 60.00	< 20.00	< 1.00	< 94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromodichloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichloropropane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Trichloroethene	13.00	67.00	120.00	290.00	5.00	46.00	29.00	25.00	43.00	57.00	180.00	29.00
Dibromochloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromoform	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Tetrachloroethene	1.00	< 1.00	< 10.00	< 20.00	1.00	2.00	6.00	1.00	2.00	< 2.00	10.00	1.00
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 0.70	< 7.00	< 14.00	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 7.00	< 7.00
Toluene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	< 10.00	**140.00**	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Xylenes, Total	< 1.00	< 1.00	< 10.00	**40.00**	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	**30.00**	**90.00**

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
METALS, CLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	0.01<	0.01<	0.01	0.08<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	120.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chromium, Total	0.06	0.06	0.06	98.00	0.13	0.04	0.04	0.03	0.06	0.17	0.11	< 0.02
Copper	0.03	< 0.02	< 0.02	0.06	< 0.05	< 0.05	< 0.05	0.05	0.02	0.02	< 0.05	0.13
Zinc	0.06	0.04	0.20	0.09	0.08	0.09	0.09	< 0.04	0.05	0.08	0.15	0.05
Chloride	490.00	130.00	380.00	900.00	120.00	120.00	82.00	300.00	270.00	190.00	180.00	140.00
Nitrate (Nitrogen)	4.60	6.90	3.40	< 0.60	0.20	10.40	9.20	4.50	32.00	< 3.20	0.20	0.20

Note: All results in milligrams per liter (mg/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04a	MW05
TOX 1 (mg/l)	0.05	0.08	0.13	0.30<	0.01	0.20
TOX 2 (mg/l)	0.10	0.08	0.08	0.30<	0.01	0.20
TOX 3 (mg/l)	0.07	0.08	0.14	0.10<	0.01	0.20
TOX 4 (mg/l)	0.05	0.06	0.08	0.10<	0.01	0.15
pH 1 (lab units)	7.11	7.32	7.05	6.67	7.44	6.83
pH 2 (lab units)	7.07	7.33	7.05	6.67	7.42	6.77
pH 3 (lab units)	7.08	7.32	7.04	6.67	7.42	6.80
pH 4 (lab units)	7.07	7.34	7.06	6.67	7.43	6.78
EC 1 (umhos/cm)	2100.00	1200.00	1800.00	3200.00	1200.00	1500.00
EC 2 (umhos/cm)	2030.00	1100.00	1800.00	3200.00	1200.00	1500.00
EC 3 (umhos/cm)	2010.00	1200.00	1800.00	3100.00	1200.00	1500.00
EC 4 (umhos/cm)	2100.00	1200.00	1800.00	3100.00	1300.00	1500.00
TOC 1 (mg/l)	8.00<	1.00	17.00	140.00<	1.00<	1.00
TOC 2 (mg/l)	9.00<	1.00	17.00	170.00<	1.00<	1.00
TOC 3 (mg/l)	8.00<	1.00	17.00	130.00<	1.00<	1.00
TOC 4 (mg/l)	8.00<	1.00	18.00	70.00<	1.00<	1.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

TABLE 6-4 (continued)
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW6b	MW07	MW08	MW09	MW10	MW11
TOX 1 (mg/l)	0.03	0.40	0.13	0.22	0.10	0.33
TOX 2 (mg/l)	0.13	< 0.01	0.16	0.20	0.20	0.07
TOX 3 (mg/l)	0.90	0.03	0.17	0.33	0.10	0.05
TOX 4 (mg/l)	< 0.01	0.14	0.14	0.45	0.10	0.14
pH 1 (lab units)	7.30	7.68	7.28	7.18	7.30	7.43
pH 2 (lab units)	7.28	7.71	7.33	7.15	7.31	7.42
pH 3 (lab units)	7.32	7.64	7.30	7.17	7.31	7.46
pH 4 (lab units)	7.26	7.62	7.19	7.19	7.31	7.43
EC 1 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1300.00	1400.00
EC 2 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1400.00	1400.00
EC 3 (umhos/cm)	1200.00	1900.00	1600.00	1500.00	1500.00	1400.00
EC 4 (umhos/cm)	1200.00	2000.00	1700.00	1400.00	1400.00	1400.00
TOC 1 (mg/l)	< 1.00	< 1.00	4.00	11.00	90.00	10.00
TOC 2 (mg/l)	< 1.00	< 1.00	4.00	13.00	1.00	9.00
TOC 3 (mg/l)	< 1.00	< 1.00	4.00	12.00	70.00	9.00
TOC 4 (mg/l)	< 1.00	< 1.00	3.00	12.00	1.00	9.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

April 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03*	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11*
Chloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromomethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Vinyl Chloride	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Methylene Chloride	< 1.00	< 1.00	< 5.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichlorofluoromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1-Dichloroethene	< 1.00	< 1.00	23.00	55.00	< 1.00	< 1.00	= 1.00	< 1.00	6.00	4.00	< 1.00	20.00
1,1-Dichloroethane	< 1.00	< 1.00	11.00	92.00	< 1.00	< 1.00	< 1.00	4.00	36.00	5.00	< 1.00	8.80
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	2.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroform	< 1.00	< 1.00	35.00	12.00	< 1.00	73.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00
1,2-Dichloroethane	< 1.00	< 1.00	36.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	8.00	< 1.00	12.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Carbon Tetrachloride	< 1.00	< 1.00	47.00	< 5.00	< 1.00	140.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromodichloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichloropropane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichloroethene	23.00	45.00	110.00	280.00	7.00	65.00	37.00	47.00	23.00	24.00	23.00	39.00
Dibromochloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromoform	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Tetrachloroethene	4.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	3.00	2.00	< 1.00	< 1.00	5.00	< 5.00
1,1,2,2-Tetrachloroethane	NR	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	NR	NR	< 1.00	< 1.00	NR	< 5.00
Chlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00

< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit
* Duplicate sample analytical results (performed by CKY)
NR Denotes not reported, compound coelutes with Tetrachloroethene and is combined with that result.

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ENSECO except where noted

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 1.00	< 50.00	< 5.00	< 0.70	< 1.00	< 0.70	< 0.70	< 1.00	< 0.70	< 0.70	< 500.00
Toluene	< 1.00	< 1.00	< 50.00	23.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	7500.00
Ethylbenzene	< 1.00	< 1.00	1200.00	15.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	2600.00
Xylenes, Total	3.00	< 1.00	60.00	50.00	< 1.00	< 1.00	< 1.00	= 1.00	< 1.00	< 1.00	7.00	11000.00

< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ENSECO

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, total	0.10	0.05	0.07	100.00	0.05	0.04	0.06	= 0.02	0.03	0.06	0.08	0.04
Copper	< 0.02	< 0.02	< 0.02	= 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium, hexavalent	< 0.05	< 0.05	< 0.05	43.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloride	660.00	150.00	420.00	990.00	120.00	80.00	85.00	180.00	120.00	140.00	270.00	120.00
Nitrate (Nitrogen)	< 0.20	7.00	3.10	0.90	5.50	8.20	8.80	3.40	2.80	4.10	6.30	1.70

January 1989 Monitor Well Results

TABLE 3-1 PRIMARY SAMPLE ANALYSES

				January 1989 Quarterly Sampling								
				Southern California Chemical								
				HALOGENATED VOLATILE ORGANIC COMPOUNDS *								
				(Concentrations in ug/l)								
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
Dichlorodifluoromethane*	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Chloride	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Vinyl Chloride	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Bromide	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Trichlorofluoromethane	ND .05	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethene	ND .01	ND 0.2	ND 0.2	2 2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methylene Chloride	ND 1.0	ND 0.2	3 . 2	1 4	ND 0.2	2 . 1	ND 0.2	2 . 2	ND 0.2	1 6	ND 0.2	1
trans-1,2-Dichloroethene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethane	ND .01	ND 0.2	4 . 4	3 6	ND 0.2	ND 0.2	ND 0.2	2 . 9	3 0	3 4	2 . 8	3 . 2
Chloroform	0 . 2	ND 0.2	1 3	3 . 7	ND 0.2	7 . 4	ND 0.2	ND 0.2	ND 0.2	8 . 9	ND 0.2	0 . 8 8
1,1,1-Trichloroethane	ND .01	ND 0.2	ND 0.2	0 . 6 8	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	2 . 9	ND 0.2	ND 0.2
Carbon Tetrachloride	ND .01	ND 0.2	1 5	ND 0.2	ND 0.2	5 . 6	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichloroethane	0 . 7	ND 0.2	2 4 0	2 0	ND 0.2	2 9	ND 0.2	ND 0.2	ND 0.2	4 . 3	3 . 7	2 1
Trichloroethene	1 9	6 0	7 4	1 2 0	6 . 7	5 . 9	5 7	3 5	6 9	5 5	3 2	3 4
1,2-Dichloropropane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Dichlorobromoethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
2-Chloroethylvinylether	ND 10.0	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
cis-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
trans-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2-Trichloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Tetrachloroethene	2 . 8	1 . 8	4 . 6	1 . 6	ND 0.2	ND 0.2	7	2 . 1	4 . 3	3 . 1	1 . 2	ND 0.2
Dibromochloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Bromoform	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2,2-Tetrachloroethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,3-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,4-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, Colorado.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

				January 1989 Quarterly Sampling Southern California Chemical								
	AROMATIC VOLATILE ORGANICS, TOTAL ORGANIC CARBON & TOTAL ORGANIC HALOGENS											
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
PURGEABLE AROMATICS *												
(Concentrations in ug/l)												
1,3-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,4-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,2-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Total Xylenes	ND .01	ND 0.5	1500	29	1.3	ND 1.0	ND 1.0	3.6	1.6	ND 1.0	ND 1.0	1.5
Benzene	ND .01	ND 0.5	7.4	ND 0.5	ND 0.5	0.9	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Toluene	ND .01	ND 0.5	17	10	ND 0.5	ND 0.5	ND 0.5	1.4	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Ethylbenzene	ND .01	ND 0.5	4900	15	ND 0.5	ND 0.5	ND 0.5	1.2	ND 0.5	ND 0.5	0.54	43
TOTAL ORGANIC CARBON **												
(Concentrations in mg/l)												
TOC #1	6.9	ND 0.5	160.0	16.0	ND 0.5	65.0	ND 0.5	3.6	1.1	2.1	2.0	5.4
TOC #2	7.8	ND 0.5	160.0	14.0	ND 0.5	64.0	ND 0.5	3.7	1.2	1.7	1.9	5.8
TOC #3	7.1	ND 0.5	160.0	14.0	ND 0.5	63.0	ND 0.5	3.6	1.2	1.8	2.0	5.3
TOC #4	7.6	ND 0.5	160.0	13.0	ND 0.5	63.0	ND 0.5	3.5	1.2	1.5	2.0	5.2
TOTAL ORGANIC HALOGEN **												
(Concentrations in ug/l)												
TOX #1	62	50	220	360	49	58	46	90	130	180	38	58
TOX #2	42	47	230	260	38	42	48	42	110	170	36	38
TOX #3	41	57	220	270	19	42	36	80	92	170	33	40
TOX #4	45	39	220	300	29	37	46	130	130	150	51	46

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, CO; ** Analyzed by Montgomery Laboratories.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

January 1989 Quarterly Sampling
Southern California Chemical
METALS, pH AND ELECTRIC CONDUCTIVITY *

COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
METALS (mg/l)												
Chromium VI (hex)	ND .01	0.017	ND .01	33.0	0.01	ND .010	ND .010	ND .010	ND .010	0.45	ND .010	ND .010
Chlorine	524.0	77.0	302.0	418.0	105.0	98.0	66.0	744.0	145.0	248.0	139.0	110.0
Nitrate (N)	5.2	7.4	0.92	ND 0.2	5.9	0.3	8.7	5.4	5.4	7.8	0.43	2.0
Nitrate (NO3)	22.9	33.0	4.0	ND 0.9	26.0	1.3	38.0	24.0	24.0	34.0	1.9	8.8
Chromium (total)	0.014	0.022	ND .014	400	ND .014	ND .014	ND .014	ND .014	ND .014	0.33	0.029	ND .014
Cadmium	ND .003	ND .003	ND .003	0.028	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003
Zinc	0.015	ND .006	ND .006	0.007	0.008	ND .006	0.021	ND .006	0.009	0.008	ND .006	ND .006
Copper	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009
pH												
Analysis #1	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #2	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #3	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #4	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
EC (umohs/cm)												
Analysis #1	2530	1320	1950	2120	1470	1370	1290	3390	1420	1700	1410	1480
Analysis #2	2500	1320	1890	2120	1470	1370	1290	3390	1420	1680	1410	1480
Analysis #3	2520	1320	1900	2120	1470	1370	1290	3390	1430	1680	1410	1480
Analysis #4	2560	1320	1890	2120	1470	1370	1290	3390	1430	1680	1410	1480

* Analyzed by Montgomery Laboratories.

Kleinfelder Analytical Data

TABLE 1
WATER-QUALITY DATA
MONITORING WELL #1
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
COMPOUND	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)	7.3		7.1		7.2	7.0	7.38	6.8	7.0	6.9	7.1		7.05	
TOC (mg/l)	3.7		19		35	21	ND 3	ND 3	13	32	10		8.5	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.1		0.038	
Sp. Cond. (umhos/cm)	2300		3400		1650	3600	3200	2800	3400	3800	2975		2500	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.08	ND.02	0.03	0.07
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.02	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.01	ND.04	ND.04	ND.02	0.10	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		0.18		0.04	ND.08	0.018	ND.03	0.06	ND.03	0.04		0.07	0.08
Chloride (mg/l)	330		300		650	920	700	570	720	770	430		460	630
Nitrate as N (mg/l)	7.0		3.7		0.5	1.3	4.06	5.3	ND.1	2.3	4.5		5.2	2.9
Nitrate as NO_3 (mg/l)	31		17		18	11	18	23	ND.4	11	19		23	

Note: ND 1 = Chemical was not detected at 1 mg/l.

	Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
1,1-Dichloroethylene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
1,2-Dichloroethane (ug/l)		ND1		ND1	2	1	0.5	1	1	ND1			ND1	
Benzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7			ND.7	
Carbon Tetrachloride (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Chloroform (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Ethylbenzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Trichloroethylene (ug/l)		16		16	18	18	9	11	2.4	4			15	
Toluene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1			ND1	
Xylene (ug/l)		ND1		ND1	ND1		ND.5	ND.5	ND.5	ND1			ND1	
Methylene Chloride (ug/l)		ND1		ND1	ND1	ND1	ND2	ND.5	1.7	ND1			ND1	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 2
WATER-QUALITY DATA
MONITORING WELL #2
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.0		7.4		7.7	7.4	7.68	7.1	7.1	7.12	7.27		7.35	
TOC (mg/l)	34		4.8		ND3	ND3	ND3	ND3	ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.04		0.032	
Sp. Cond. (umhos/cm)	2300		1900		1800	2100	2280	1900	3400	1500	1550		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.05	ND.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.03		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.03	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		ND.03		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	0.03		ND.02	0.03
Chloride (mg/l)	270		180		220	410	510	250	700	180	110		160	160
Nitrate as N (mg/l)	2.1		5.8		5.4	5.0	6.25	7.2	8.8	7.2	7.2		7.2	7.1
Nitrate as NO_3 (mg/l)	9.1		26		24	22	27.7	32	39	32	32		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	4	3		ND1	5	9	21	20	2.5	ND1		ND1		
1,1-Dichloroethylene (ug/l)	3	ND1		ND1	3	5	0.9	11	0.94	ND1		ND1		
1,2-Dichloroethane (ug/l)	ND1	ND1		3	1	ND1	ND.5	2.2	ND.5	ND1		ND1		
Benzene (ug/l)	ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7		
Carbon Tetrachloride (ug/l)	ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Chloroform (ug/l)	ND1	ND1		ND1	2	2	1	ND.5	0.73	ND1		ND1		
Ethylbenzene (ug/l)	ND1	ND1		3	2	ND1	ND.5	6.2	ND.5	ND1		ND1		
Trichloroethylene (ug/l)	21	22		12	38	67	20	93	40	5		23		
Toluene (ug/l)	ND1	ND1		3	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Xylene (ug/l)	ND1	ND1		2	ND1		ND.5	ND.5	ND.5	ND1		ND1		
Methylene Chloride (ug/l)	ND1	ND1		ND1	ND1	ND1	ND2	ND.5	11	ND1		ND1		

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 3
WATER-QUALITY DATA
MONITORING WELL #3
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.4		7.0		7.2	7.2	7.55	6.9	7.0	5.9	6.78		7.10	
TOC (mg/l)	16		190		44	29	31	20.5	21	50	135		81	
TOX (mg/l)	0.17		ND.08		.18	.17	.21	.22	.15	.27	.10		0.24	
Sp. Cond. (umhos/cm)	1700		1500		2200	2200	2400	2300	2200	3300	1575		2100	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	ND.02	ND.02	0.07
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.4		ND.05	ND.05
Cadmium (mg/l)	ND.0002	ND.011	ND .009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		0.02	0.02
Zinc (mg/l)	ND.019		0.26		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	ND.02		0.04	0.02
Chloride (mg/l)	170		76		400	520	550	420	380	740	190		350	840
Nitrate as N (mg/l)	3.0		ND 1		6.5	4.1	4.81	3.4	3.8	5.2	ND.2		2.7	4.8
Nitrate as NO_3 (mg/l)	13		ND4.4		29	18	21.3	15	17	23	ND1		12	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	6	ND50	5	4	5	5	4	1.6	6.9	ND10		ND50	ND25
1,1-Dichloroethylene (ug/l)	14	ND50	11	7	13	17	7.8	3.9	15	ND10		ND50	ND25
1,2-Dichloroethane (ug/l)	ND1	ND50	9	6	7	11	18	2.11	ND.5	36		ND50	ND25
Benzene (ug/l)	9	ND50	3	ND1	3	2	ND.5	ND.5	ND.5	ND10		ND35	ND17
Carbon Tetrachloride (ug/l)	73	ND50	78	110	58	87	50	73	87	ND10		ND50	ND25
Chloroform (ug/l)	46	ND50	36	97	33	45	20	22	ND.5	ND10		ND50	ND25
Ethylbenzene (ug/l)	ND1	95000	1100	ND1	310	4	ND.5	ND.5	290	8500		1700	1000
Trichloroethylene (ug/l)	320	ND50	160	170	200	160	98	70	150	14		150	150
Toluene (ug/l)	2	15000	11	ND1	ND1	ND1	ND.5	ND.5	ND.5	8500		550	ND25
Xylene (ug/l)	ND1	20000	2000	ND1	10		ND.5	ND.5	ND.5	23000		850	200
Methylene Chloride (ug/l)	ND1	ND50	ND1	ND1	2	ND1	ND2	ND2	9.6	ND10		ND50	100

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 4
WATER-QUALITY DATA
MONITORING WELL #4
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED													
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.3		7.1		7.1	6.6	7.4	6.7	6.3	6.3	6.6		6.55	
TOC (mg/l)	36		26		110	79	98	26.5	133	90	46		57	
TOX (mg/l)	ND .05		.26		.19	2.3	1.40	.68	2.10	1.3	.36		0.73	
Sp. Cond. (umhos/cm)	6400		3600		3500	4250	4950	4000	11000	7300	4625		5900	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	500	550	61		120	180	170	98	440	190	140	238	218	180
Chromium (HEX) (mg/l)	500	500			120	180	170	100	430	232	140		84	170
Cadmium (mg/l)	0.78	0.92	0.035		0.04	0.09	0.07	0.05	ND .01	.33	.06		0.13	0.12
Copper (mg/l)	ND .08		ND .02		ND .02	ND .04	ND .03	ND .02	ND .02	ND .02	ND .03		0.04	ND.02
Zinc (mg/l)	0.06		ND .03		ND .04	ND .08	ND .007	ND .03	ND .03	ND .03	ND .03		0.15	ND.02
Chloride (mg/l)	2300		1100		770	1300	1400	960	3500	1800	790		1600	1400
Nitrate as N (mg/l)	18	12	ND 13		0.5	1.3	1.1	ND .1	ND .7	1.3	.2		0.75	3.9
Nitrate as NO_3 (mg/l)	81	55	ND 55		2.4	5.6	5.0	ND .4	ND 3	5.8	1.1		3.3	

Note: ND 1 = Chemical was not detected at 1 mg/l.

	Organic Compounds (EPA Method 624)											
1,1-Dichloroethane (ug/l)	100	100	42	57	61	120	27	110	120	70	130	100
1,1-Dichloroethylene (ug/l)	100	42	34	41	61	67	20	94	110	56	60	50
1,2-Dichloroethane (ug/l)	ND 50	17	34	61	12	140	74	74	100	35	90	70
Benzene (ug/l)	ND 50	16	9	ND 1	ND 10	5	ND 5	ND 5	ND .5	ND 14	20	ND.7
Carbon Tetrachloride (ug/l)	ND 50	ND 1	ND 1	ND 1	ND 10	ND 1	ND 5	ND 5	1.5	ND 20	ND 10	ND10
Chloroform (ug/l)	ND 50	7	3	8	10	12	6.2	30	23	ND 20	23	ND10
Ethylbenzene (ug/l)	3000	36	50	1100	670	220	160	1500	380	70	40	ND10
Trichloroethylene (ug/l)	550	140	170	200	280	290	180	280	190	110	250	250
Toluene (ug/l)	8300	130	25	330	260	220	240	3700	580	180	90	ND10
Xylene (ug/l)	10000	100	30	300	300	300	731	2700	570	200	120	40
Methylene Chloride (ug/l)	100	12	ND 1	17	ND 10	ND 1	27	140	110	ND 20	110	70

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 5
WATER-QUALITY DATA
MONITORING WELL #4A
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.8	7.5		7.6	7.5	7.7		7.7	7.2	7.3		7.45		
TOC (mg/l)	40	8.3		ND3	ND3	ND3		ND3	ND3	ND1		ND1		
TOX (mg/l)	ND.05	ND.08		ND.08	ND.08	ND.08		.14	ND.03	ND.01		0.15		
Sp. Cond. (umhos/cm)	1500	1500		850	1400	1525		1600	1700	1662		1550		
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.03	ND.03		ND.03	ND.03	ND.03		ND.04	ND.04	.03	.02	ND.02	0.06	
Chromium (HEX) (mg/l)	ND.5			ND.02	ND.02	ND.02		ND.02	ND.02	ND.1		ND.05	ND.05	
Cadmium (mg/l)	ND.01	ND.01		ND.01	ND.01	ND.01		ND.01	ND.02	ND.02		ND.01	ND.01	
Copper (mg/l)		ND.02		ND.02	ND.04	ND.03		ND.02	ND.02	ND.02		0.02	ND.02	
Zinc (mg/l)		ND.03		ND.04	ND.08	ND.007		ND.03	ND.03	ND.02		ND.02	0.02	
Chloride (mg/l)		100		110	120	130		160	129	97		100	160	
Nitrate as N (mg/l)	4.5	7.5		6.1	4.7	6.3		5.4	6.1	3.8		6.1	6.3	
Nitrate as NO_3 (mg/l)	20	33		27	21	28		24	27	17		27		
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		13		11	3	19		140	1.2	ND1		ND10		
1,1-Dichloroethylene (ug/l)		1		2	ND1	2		50	ND.5	ND1		ND10		
1,2-Dichloroethane(ug/l)		ND1		ND1	ND1	2		1.5	ND.5	ND1		ND10		
Benzene (ug/l)		8		ND1	ND1	ND1		ND.5	ND.5	ND.7		ND7		
Carbon Tetrachloride (ug/l)		ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10		
Chloroform (ug/l)		ND1		ND1	ND1	2		17	ND.5	ND1		ND10		
Ethylbenzene (ug/l)		ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10		
Trichloroethylene (ug/l)		8		7	3	12		82	3.2	ND1		ND20		
Toluene (ug/l)		ND1		ND1	ND1	ND1		1.5	ND.5	ND1		ND10		
Xylene (ug/l)		ND1		ND1	ND1			ND.5	ND.5	ND1		ND10		
Methylene Chloride (ug/l)		ND1		ND1	ND1	ND1		11	ND.5	ND1		100		

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 6
WATER-QUALITY DATA
MONITORING WELL #5
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.4		7.3	7.3	7.82	6.9	7.0	7.6	7.06		7.10	
TOC (mg/l)	ND3		4.8		5	3	ND3	ND3	ND3	5	7		21	
TOX (mg/l)	.19		.16		.65	.18	.30	.45	.36	ND.03	.3		0.13	
Sp. Cond. (umhos/cm)	1700		1200		1400	1100	1220	1400	1400	1300	1537		1400	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.1	ND.02	0.05	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.019		0.18		ND.04	ND.08	ND.001	ND.031	ND.03	ND.03	.4		ND.02	ND.02
Chloride (mg/l)	2.0		66		79	290	143.5	110	110	100	90		91	93
Nitrate as N (mg/l)	0.42		8.8		12	8.6	11.13	10	15	3.4	5		14	3.6
Nitrate as NO_3 (mg/l)	1.9		39		55	38	49.3	45	65	24	22		3.1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	ND1	ND 1	2	2	7	4	5.4	.29	ND1		ND1		
1,1-Dichloroethylene (ug/l)	ND1	ND1	3	3	4	2.7	5.2	.25	ND1		ND1		
1,2-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.3	ND1		7		
Benzene (ug/l)	5	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7		
Carbon Tetrachloride (ug/l)	3	11	45.5	37	68	100	120	99	20		26		
Chloroform (ug/l)	2	10	14.5	16	43	48	50	95	10		18		
Ethylbenzene (ug/l)	ND1	ND1	ND1	6	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Trichloroethylene (ug/l)	10	24	64	36	70	70	59	26	5		18		
Toluene (ug/l)	1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Xylene (ug/l)	ND1	ND1	ND1	ND1		ND.5	7.3	ND.5	ND1		ND1		
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND2	ND.5	4.3	ND1		ND1		

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 7
WATER-QUALITY DATA
MONITORING WELL #6B
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.6		7.4		7.5	7.8	7.6	7.1	7.4	7.1	7.13		7.10	
TOC (mg/l)	ND3		6.5		ND3	ND3	ND3	ND3	ND3	9	ND1		ND1	
TOX (mg/l)	0.1		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.03	.02		ND.01	
Sp. Cond. (umhos/cm)	1400		1300		1400	1200	1425	1400	1600	1400	1265		1300	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	0.0038		ND.03		ND .03	ND.02	ND.03	ND.04	ND.04	ND.04	.02	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.03	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.03		ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		.02	ND.02
Chloride (mg/l)	79		220		82	100	140	92	130	94	61		89	100
Nitrate as N (mg/l)	6.9		8.8		7.0	5.2	6.1	7	8.4	8.4	8.4		7.3	8.0
Nitrate as NO_3 (mg/l)	28		39		31	23	27	31	37	37	37		32	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			ND1	ND1	ND1	ND.5	1.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		30			19	23.5	24	21	20	33	22		21	
Toluene (ug/l)		ND1			ND1	ND1	ND1	ND.5	0.8	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			ND1	ND1		ND.5	7.9	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND.5	2.6	1.2	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 8
WATER-QUALITY DATA
MONITORING WELL #7
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.3	7.3		7.4	7.2	7.3	6.5	6.8	7.3	8.94		6.95	
TOC (mg/l)		260	6.5		5	17	ND3	43	7	5	2		4.9	
TOX (mg/l)		0.081	ND.08		ND.08	ND.08	ND.08	ND.08	.11	ND.03	.08		0.18	
Sp. Cond. (umhos/cm)		2700	1700		1900	5600	5850	3700	3300	5000	8500		2800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.02	ND.02	0.07	0.04
Chromium (HEX) (mg/l)		ND.5	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	0.08	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.04	0.022	ND.03	0.04	ND.03	ND.02		ND.02	ND.02
Chloride (mg/l)		380	190		280	1800	1700	630	610	1200	1900		570	1400
Nitrate as N (mg/l)		27	5.0		4.3	2.7	4.4	19	25	1.1	NDD.2		ND.2	5.5
Nitrate as NO_3 (mg/l)		120	22		19	12	19.5	82	110	19	ND1		ND1	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		2			8	42	30	7.1	14	6	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			2	5	6	ND5	6	.55	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	2	ND1	ND5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		64			ND1	ND1	ND1	ND5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	8.2	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			4	ND1	ND1	1.0	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		29			67	71	70	180	130	35	24		100	
Toluene (ug/l)		2			5	ND1	ND1	2.2	3.6	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			4	ND1		ND5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	1.1	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 9
WATER-QUALITY DATA
MONITORING WELL #8
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.5		7.4	7.4	7.4	6.9	7.1	7.1	7.23		7.25	
TOC (mg/l)		99	7		8	ND3	ND3	ND3	5	ND3	ND1		1.5	
TOX (mg/l)		0.44	.09		ND.08	.10	.15	ND.08	.19	ND.08	.04		.06	
Sp. Cond. (umhos/cm)		2800	1500		1700	1600	1800	2000	2100	1300	1550		1,600	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.05	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.03	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		0.05	0.04
Chloride (mg/l)			530		170	270	250	300	300	120	140		190	130
Nitrate as N (mg/l)		1.3	4.2		3.2	2.7	3.2	2.5	2.2	4.3	4.5		3.7	5.7
Nitrate as NO_3 (mg/l)		5.8	39		14	12	14.1	11	10	19	20		16	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			41		76	160	160	55	160	45	50		42	2
1,1-Dichloroethylene (ug/l)			3		8	17	19	5.6	29	5.5	2.8		6	ND1
1,2-Dichloroethane (ug/l)			1		14	14	8	9.5	16	ND.5	ND1		3	30
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	ND.7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	8	ND.5	ND.5	ND.5	ND1		ND1	ND1
Chloroform (ug/l)			ND1		2	2	2	5.6	ND.5	0.55	ND1		ND1	ND1
Ethylbenzene (ug/l)			ND1		2	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	ND1
Trichloroethylene (ug/l)			19		28	52	44	67	51	25	17		27	20
Toluene (ug/l)			ND1		3	ND1	ND1	2.3	ND.5	ND.5	ND1		ND1	ND1
Xylene (ug/l)			ND1		1	ND1		ND.5	ND.5	ND.5	ND1		ND1	ND1
Methylene Chloride (ug/l)			5		ND1	ND1	ND1	ND.5	2.4	3.0	ND1		ND1	ND1	ND1

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 10
WATER-QUALITY DATA
MONITORING WELL #9
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.4	7.4		7.3	7.0	7.4	6.9	6.8	6.9	7.15		7.0	
TOC (mg/l)		210	14		28	2.8	24	ND3	42	15	3		4.0	
TOX (mg/l)		0.13	.26		.12	.28	.37	.37	.48	.28	.16		0.22	
Sp. Cond. (umhos/cm)		2200	2800		2000	2400	2675	2500	3200	3100	2075		1950	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	0.12	.94	1.30	2.42	1.66	2.75
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	0.05	ND.02	ND.02	0.05	.59	1.30		0.8	1.5
Cadmium (mg/l)		ND.01	ND.00		ND.01	ND1	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	0.018	ND.03	ND.03	ND.03	ND.02		0.05	0.03
Chloride (mg/l)		300	530		250	720	670	470	640	630	290		290	490
Nitrate as N (mg/l)		1.4	8.8		3.2	1.4	3.72	4.1	2.9	8.4	7.2		5.0	7.6
Nitrate as NO_3 (mg/l)		6.3	39		14	6.2	16.5	18	13	37	32		22	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1 Dichloroethane (ug/l)		99	50	360	250	110	140	130	40		ND10	90	
1,1-Dichloroethylene (ug/l)		18	18	200	110	44	72	84	50		29	30	
1,2-Dichloroethane (ug/l)		10	13	90	52	90	69	ND.5	6		90	ND10	
Benzene (ug/l)		ND1	ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND.7		ND7	ND7	
Carbon Tetrachloride (ug/l)		ND1	ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10	
Chloroform (ug/l)		20	4	30	22	10	19	28	13		ND10	10	
Ethylbenzene (ug/l)		ND1	ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10	
Trichloroethylene (ug/l)		61	3	550	240	150	160	150	17		120	90	
Toluene (ug/l)		ND1	ND1	ND5	ND1	0.7	ND2.5	ND.5	ND1		ND10	ND10	
Xylene (ug/l)		ND1	ND1	ND5		ND.5	ND2.5	ND.5	ND1		ND10	ND10	
Methylene Chloride (ug/l)		110	ND1	ND5	18	29	33	83	35		ND10	10	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 11
WATER-QUALITY DATA
MONITORING WELL #10
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.8		7.6	7.4	7.8	7.4	7.2	7.1	7.51		7.20	
TOC (mg/l)		440	10		130	103	135	33.8	158	56	7		29	
TOX (mg/l)		0.17	ND.08		ND.08	.14	.15	.20	.62	.18	.06		0.22	
Sp. Cond. (umhos/cm)		2100	1300		1600	1400	1550	1600	2100	1900	1355		1800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	.05	0.05	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		0.05	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		0.35	ND.02
Chloride (mg/l)			150		120	150	160	160	260	230	100		210	230
Nitrate as N (mg/l)		ND.1	ND.1		0.1	ND.01	ND.1	ND.1	ND.1	ND.1	ND.2		ND.2	ND.2
Nitrate as NO_3 (mg/l)		ND4.4	ND4.4		0.6	ND.04	ND.4	ND.4	ND.4	ND.4	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	ND50	2	6	ND10	20	ND5	23	21	3.7		32	ND5	
1,1-Dichloroethylene (ug/l)	ND50	1	7	14	ND20	ND5	41	28	ND1		21	ND5	
1,2 Dichloroethane (ug/l)	ND50	17	86	200	270	63	160	93	15		70	40	
Benzene (ug/l)	ND50	ND1	ND1	ND10	ND20	ND5	ND2.5	ND.5	ND.7		ND7	ND3	
Carbon Tetrachloride (ug/l)	ND50	ND1	ND1	ND10	ND20	ND5	ND2.5	ND.5	ND1		ND10	ND5	
Chloroform (ug/l)	50	ND1	ND1	ND10	ND20	ND5	3.1	2.3	ND1		ND10	ND5	
Ethylbenzene (ug/l)	6500	68	ND1	2200	1800	330	2000	360	ND1		ND10	ND5	
Trichloroethylene (ug/l)	250	29	56	93	120	62	160	130	14		90	60	
Toluene (ug/l)	17000	ND1	ND1	36	560	ND5	14	ND.5	ND1		ND10	ND5	
Xylene (ug/l)	20000	ND1	70	90	600	120	500	ND.5	ND1		ND10	ND5	
Methylene Chloride (ug/l)	100	ND1	ND1	ND10	ND20	ND5	13	1.8	ND1		ND10	14	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 12
WATER-QUALITY DATA
MONITORING WELL #11
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.6	7.8		7.2	7.3	7.5	7.5	7.4	7.4	7.34		7.45		
TOC (mg/l)	54	13		120	156	125	26.8	58	61	12		20		
TOX (mg/l)	ND.05	0.1		ND.08	ND.08	.12	.14	.15	ND.08	.07		0.078		
Sp. Cond. (umhos/cm)	1600	1600		1700	1600	1800	1700	2100	1600	1895		1500		
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.04	ND.02	ND.02	0.05	
Chromium (HEX) (mg/l)	ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05	
Cadmium (mg/l)	ND.01	ND.01		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01	
Copper (mg/l)		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.01	ND.02	
Zinc (mg/l)		ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		ND.02	0.02	
Chloride (mg/l)	220	230		180	230	240	170	270	110	86		120	110	
Nitrate as N (mg/l)	1.2	2.5		1.1	ND1	0.1	1.2	0.7	1.5	2.2		1.5	1.7	
Nitrate as NO_3 (mg/l)	5.2	11		4.8	ND.4	0.5	5.5	3.3	6.8	9.6		65		

Note: ND 1 = Chemical was not detected at 1 mg/l.

	Organic Compounds (EPA Method 624)										
1,1 Dichloroethane (ug/l)	10	4	10	ND200	ND100	6.9	12	2.3	2.5	ND10	ND5
1,1 Dichloroethylene (ug/l)	8	2	5	ND200	ND100	5.0	11	2.6	2.3	ND10	ND5
1,2 Dichloroethane (ug/l)	8	31	17	ND200	130	95	21	89	21	ND10	60
Benzene (ug/l)	ND1	3	ND1	ND200	ND100	1.5	ND.5	ND.5	ND.7	ND7	ND3
Carbon Tetrachloride (ug/l)	ND1	ND1	ND1	ND200	ND100	ND.5	ND.5	ND.5	ND1	ND10	ND5
Chloroform (ug/l)	3	3	10	ND200	ND100	3.3	3.5	1.0	ND1	ND10	ND5
Ethylbenzene (ug/l)	13	1800	2200	6400	3300	ND.5	1200	180	17	ND10	130
Trichloroethylene (ug/l)	110	36	76	ND200	180	46	81	36	20	70	30
Toluene (ug/l)	ND1	5400	5200	14000	7500	3.6	360	ND.5	ND1	ND10	ND5
Xylene (ug/l)	20	4000	1500	10000	3000	220	370	ND.5	ND1	110	ND5
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND200	ND100	1.8	8.4	ND.5	3	ND10	16

Note: ND 1 = Compound was not detected at 1 ug/l.

APPENDIX C

ATI ANALYTICAL REPORTS

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 001303

February 8, 1990

Camp Dresser & McKee Inc.
18881 Von Karman, Suite 650
Irvine, California 92715

FEB

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O. No.: 33880

Attention: Bill Grove

On January 24, 1990, Analytical Technologies, Inc. received eight water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Senior Project Manager

Richard M. Amano
Laboratory Manager

ML:bc

cc: Ed Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/24/90
REPORT DATE : 02/08/90

ATI I.D. : 001303

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC MW06B 006	WATER	01/24/90
02	SCC MW07 006	WATER	01/24/90
03	SCC MW4A 006	WATER	01/24/90
04	SCC MW04 006	WATER	01/24/90
05	SCC EB02 006	WATER	01/24/90
06	SCC MW31 006	WATER	01/24/90
07	SCC SP01 006	WATER	01/24/90
08	SCC TB03 006	WATER	01/15/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ATI I.D. 001303

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & MCKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
pH	ELECTRODE	EPA 150.1
ELECTRICAL CONDUCTIVITY	ELECTRODE	EPA 9050
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
TOTAL ORGANIC CARBON	TOC ANALYZER	EPA 9060
TOTAL ORGANIC HALIDES	TOX ANALYZER	EPA 9020
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/HALL	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 001303

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/24/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/L	77.1	300	121	2200	<2.0
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02	<0.02	109	<0.02
ELECTRICAL CONDUCTIVITY - REP 1		1250	2150	1510	4340	<20
REP 2		1270	2160	1510	4380	<20
REP 3		1260	2170	1530	4360	<20
REP 4		1280	2200	1530	4440	<20
NITRATE AS NITROGEN	MG/L	9.7	6.1	6.0	0.68	<0.05
PH - REP 1	MG/L	7.36	7.69	7.41	6.70	6.12
REP 2	MG/L	7.34	7.74	7.42	6.67	6.05
REP 3	MG/L	7.35	7.72	7.43	6.72	5.93
REP 4	MG/L	7.39	7.74	7.47	6.67	6.21
TOTAL ORGANIC CARBON - REP 1	MG/L	1.2	1.9	8.3	59.0	0.9
REP 2	MG/L	1.3	1.3	4.4	59.3	0.9
REP 3	MG/L	1.3	1.1	2.5	57.0	1.0
REP 4	MG/L	0.9	1.6	1.5	59.1	1.1
TOTAL ORGANIC HALIDE - REP 1	MG/L	0.057	0.037	0.008	1.7	0.018
REP 2	MG/L	0.062	0.044	<0.008	1.7	0.021
REP 3	MG/L	0.058	0.044	0.013	1.3	0.019
REP 4	MG/L	0.059	0.038	0.013	2.2	0.020

2279-111-TA

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 001303

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/24/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	06	07
CHLORIDE	MG/L	2200	-
CHROMIUM HEXAVALENT	MG/L	108	0.94
ELECTRICAL CONDUCTIVITY-REP 1		4330	-
REP 2		4340	-
REP 3		4340	-
REP 4		4370	-
NITRATE AS NITROGEN	MG/L	0.67	-
PH - REP 1	MG/L	6.48	-
REP 2	MG/L	6.66	-
REP 3	MG/L	6.66	-
REP 4	MG/L	6.56	-
TOTAL ORGANIC CARBON - REP 1	MG/L	58.6	-
REP 2	MG/L	59.0	-
REP 3	MG/L	58.7	-
REP 4	MG/L	59.0	-
TOTAL ORGANIC HALIDE - REP 1	MG/L	1.1	-
REP 2	MG/L	1.0	-
REP 3	MG/L	1.1	-
REP 4	MG/L	1.5	-

Analytical Technologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001303

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00130304	~~1160~~ 2200	~~1160~~ 2200	0	~~7910~~	~~6400~~	~~105~~
CHROMIUM HEXAVALENT	MG/L	00130301	<0.02	<0.02	0	0.50	0.50	100
ELECTRICAL CONDUCTIVITY	MG/L	00130303	1530	1530	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
ELECTRICAL CONDUCTIVITY	MG/L	00130306	4340	4340	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
NITRATE AS NITROGEN	MG/L	00130306	0.67	0.56	18	19.2	20.0	93
PH - REP 1	MG/L	00130303	7.42	7.43	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00130302	1.6	1.3	20	20.9	20.0	97
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00130305	1.0	1.1	10	19.6	20.0	93
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00132301	6.4	6.5	2	20.7	20.0	71
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128603	0.083	0.078	6	0.28	0.20	100
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00130303	0.008	<0.008	0	0.12	0.10	120
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 001303

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/24/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04	05
CADMIUM	MG/L	<0.005	<0.005	<0.005	0.12	<0.005
CHROMIUM	MG/L	<0.01	<0.01	<0.01	95.1	0.03
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
ZINC	MG/L	0.02	<0.01	<0.01	0.01	0.02

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 001303

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/24/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	06	07
CADMIUM	MG/L	0.12	0.52
CHROMIUM	MG/L	97.1	5.1
COPPER	MG/L	0.02	1.6
ZINC	MG/L	0.01	3.1

Analytical Technologies, Inc. METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001303

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00130302	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00130302	<0.01	<0.01	0	1.8	2.0	90
COPPER	MG/L	00130302	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00130302	<0.01	<0.01	0	2.0	2.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130301

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW06B 006	DATE ANALYZED	: 02/05/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	6.4
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	46
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130302

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW07 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	2.4
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	<1.0
1,2-DICHLOROETHENE (TOTAL)	<1.0
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	<1.0
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	39
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW4A 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	8.0
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	105
TRIFLUOROTOLUENE (%)	110

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130304

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW04 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
BENZENE	<12
BROMODICHLOROMETHANE	<5.0
BROMOFORM	<5.0
BROMOMETHANE	<5.0
CARBON TETRACHLORIDE	<5.0
CHLOROBENZENE	<12
CHLOROETHANE	<5.0
CHLOROFORM	5.1
CHLOROMETHANE	<5.0
DIBROMOCHLOROMETHANE	<5.0
1,2-DICHLOROBENZENE	<12
1,3-DICHLOROBENZENE	<12
1,4-DICHLOROBENZENE	<12
DICHLORODIFLUOROMETHANE	<5.0
1,1-DICHLOROETHANE	72
1,2-DICHLOROETHANE	100
1,1-DICHLOROETHENE	33
1,2-DICHLOROETHENE (TOTAL)	<5.0
1,2-DICHLOROPROPANE	<5.0
CIS-1,3-DICHLOROPROPENE	<5.0
TRANS-1,3-DICHLOROPROPENE	<5.0
ETHYLBENZENE	<12
METHYLENE CHLORIDE	74
1,1,2,2-TETRACHLOROETHANE	<5.0
TETRACHLOROETHENE	<5.0
TOLUENE	<12
1,1,1-TRICHLOROETHANE	<5.0
1,1,2-TRICHLOROETHANE	<5.0
TRICHLOROETHENE	220
TRICHLOROFLUOROMETHANE	<50
VINYL CHLORIDE	<5.0
XYLENES (TOTAL)	<25

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130305

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC EB02 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	<1.0
BROMODICHLOROMETHANE	5.1
BROMOFORM	<0.40
BROMOMETHANE	<0.40
CARBON TETRACHLORIDE	<0.40
CHLOROBENZENE	<1.0
CHLOROETHANE	<0.40
CHLOROFORM	6.3
CHLOROMETHANE	<0.40
DIBROMOCHLOROMETHANE	5.3
1,2-DICHLOROBENZENE	<1.0
1,3-DICHLOROBENZENE	<1.0
1,4-DICHLOROBENZENE	<1.0
DICHLORODIFLUOROMETHANE	<0.40
1,1-DICHLOROETHANE	<0.40
1,2-DICHLOROETHANE	<0.40
1,1-DICHLOROETHENE	<0.40
1,2-DICHLOROETHENE (TOTAL)	<0.40
1,2-DICHLOROPROPANE	<0.40
CIS-1,3-DICHLOROPROPENE	<0.40
TRANS-1,3-DICHLOROPROPENE	<0.40
ETHYLBENZENE	<1.0
METHYLENE CHLORIDE	<4.0
1,1,2,2-TETRACHLOROETHANE	<0.40
TETRACHLOROETHENE	<0.40
TOLUENE	<1.00
1,1,1-TRICHLOROETHANE	<0.40
1,1,2-TRICHLOROETHANE	<0.40
TRICHLOROETHENE	<0.40
TRICHLOROFLUOROMETHANE	<4.0
VINYL CHLORIDE	<0.40
XYLENES (TOTAL)	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	102
TRIFLUOROTOLUENE (%)	103

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130306

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW31 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
BENZENE	<12
BROMODICHLOROMETHANE	<5.0
BROMOFORM	<5.0
BROMOMETHANE	<5.0
CARBON TETRACHLORIDE	<5.0
CHLOROBENZENE	<12
CHLOROETHANE	<5.0
CHLOROFORM	5.2
CHLOROMETHANE	<5.0
DIBROMOCHLOROMETHANE	<5.0
1,2-DICHLOROBENZENE	<12
1,3-DICHLOROBENZENE	<12
1,4-DICHLOROBENZENE	<12
DICHLORODIFLUOROMETHANE	<5.0
1,1-DICHLOROETHANE	74
1,2-DICHLOROETHANE	100
1,1-DICHLOROETHENE	40
1,2-DICHLOROETHENE (TOTAL)	<5.0
1,2-DICHLOROPROPANE	<5.0
CIS-1,3-DICHLOROPROPENE	<5.0
TRANS-1,3-DICHLOROPROPENE	<5.0
ETHYLBENZENE	<12
METHYLENE CHLORIDE	74
1,1,2,2-TETRACHLOROETHANE	<5.0
TETRACHLOROETHENE	<5.0
TOLUENE	<12
1,1,1-TRICHLOROETHANE	<5.0
1,1,2-TRICHLOROETHANE	<5.0
TRICHLOROETHENE	240
TRICHLOROFLUOROMETHANE	<50
VINYL CHLORIDE	<5.0
XYLENES (TOTAL)	<25

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	97
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130308

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/15/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC TB03 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 001303
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 02/05/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	94
TRIFLUOROTOLUENE (%)	108

Analytical Technologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 001303
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/30/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
TRIFLUOROTOLUENE (%)	90

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 001303
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/29/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	104

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 02/06/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00138704	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	3.7	92	3.6	90	3
CHLOROBENZENE	<0.50	8.0	7.7	96	7.1	89	8
1,1-DICHLOROETHENE	<0.20	4.0	3.3	82	3.3	82	0
TRICHLOROETHENE	<0.20	4.0	3.6	90	3.6	90	0
TETRACHLOROETHENE	<0.20	4.0	3.6	90	3.4	85	6
BENZENE	<0.50	4.0	4.4	110	4.2	105	5
TOLUENE	<0.50	4.0	4.6	115	4.2	105	9

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/31/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00126804	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	4.3	108	4.5	113	5
CHLOROBENZENE	<0.50	8.0	8.2	103	9.0	113	9
1,1-DICHLOROETHENE	<0.20	4.0	3.3	83	3.3	83	0
TRICHLOROETHENE	<0.20	4.0	4.0	100	4.4	110	10
TETRACHLOROETHENE	<0.20	4.0	3.8	90	4.1	103	8
BENZENE	<0.50	4.0	4.4	110	4.5	113	2
TOLUENE	<0.50	4.0	4.2	105	4.5	113	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/25/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00126604	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	3.3	83	3.2	80	3
CHLOROBENZENE	<0.50	8.0	7.7	96	6.3	79	20
1,1-DICHLOROETHENE	<0.20	4.0	3.0	75	2.8	70	7
TRICHLOROETHENE	<0.20	4.0	3.9	98	3.4	85	13
TETRACHLOROETHENE	<0.20	4.0	3.9	98	3.2	80	20
BENZENE	<0.50	4.0	3.8	95	3.5	93	8
TOLUENE	<0.50	4.0	3.9	98	3.6	90	8

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/31/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00128802	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	3.7	93	3.6	90	3
CHLOROBENZENE	<0.50	8.0	7.5	94	6.8	85	10
1,1-DICHLOROETHENE	<0.20	4.0	3.1	78	2.8	70	10
TRICHLOROETHENE	<0.20	4.0	4.2	105	3.7	93	13
TETRACHLOROETHENE	<0.20	4.0	3.8	90	3.7	93	3
BENZENE	<0.50	4.0	4.4	110	3.9	98	12
TOLUENE	<0.50	4.0	4.4	110	3.8	95	15

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00130307

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/24/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/24/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC SP01 006	DATE ANALYZED	: 02/03/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
BENZENE	92
TOLUENE	100
CHLOROBENZENE	<12
ETHYLBENZENE	97
1,3-DICHLOROBENZENE	<12
1,2 AND 1,4-DICHLOROBENZENE	<12
XYLENES (TOTAL)	210
SURROGATE PERCENT RECOVERIES	
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

		ATI I.D.	: 001303
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/30/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
TOLUENE	<0.50
CHLOROBENZENE	<0.50
ETHYLBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,2 AND 1,4-DICHLOROBENZENE	<0.50
XYLENES (TOTAL)	<1.0
SURROGATE PERCENT RECOVERIES	
TRIFLUOROTOLUENE (%)	101

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001303

TEST : EPA 8020 (AROMATIC VOLATILE ORGANICS)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/30/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00132701	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE	<0.50	0.500	0.46	92	0.49	98	6
TOLUENE	<0.50	0.500	0.48	96	0.53	106	10

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 001267

February 8, 1990

Camp Dresser & McKee, Inc.
18881 Von Karman, Suite #650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111

P.O. No.: 33880

Attention: Bill Grove

On January 22, 1990, Analytical Technologies, Inc. received four water and one trip blank samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Senior Project Manager

Richard M. Amano
Laboratory Manager

ML:em

cc: Ed Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670

Analytical Technologies, Inc.

ATI I.D. 001267

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & MCKEE, INC. PROJECT NO.: 2279-111
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
ELECTRICAL CONDUCTIVITY	ELECTRODE	EPA 9050
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
pH	ELECTRODE	EPA 150.1
TOTAL ORGANIC CARBON	TOC ANALYZER	EPA 9060
TOTAL ORGANIC HALIDES	TOX ANALYZER	EPA 9020
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/HALL	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 01/22/90
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL REPORT DATE : 02/08/90
ATI I.D. : 001267

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC MW01 006	WATER	01/22/90
02	SCC MW03 006	WATER	01/22/90
03	SCC MW30 006	WATER	01/22/90
04	SCC MW10 006	WATER	01/22/90
05	SCC TB01 006 (TRIP BLANKS 821,823)	WATER	01/15/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	5

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 001267

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/22/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04
CHLORIDE	MG/L	513	309	300	208
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02	<0.02	<0.02
ELECTRICAL CONDUCTIVITY-REP 1		2640	1970	1970	1790
REP 2		2640	1990	2010	1810
REP 3		2550	2000	2020	1810
REP 4		2650	2010	2020	1810
NITRATE AS NITROGEN	MG/L	4.9	1.3	1.2	0.2
PH - REP 1	MG/L	7.03	7.41	7.46	7.70
REP 2	MG/L	6.98	7.44	7.42	7.80
REP 3	MG/L	7.16	7.49	7.53	7.71
REP 4	MG/L	7.27	7.46	7.45	7.81
TOTAL ORGANIC CARBON - REP 1	MG/L	9.2	38.2	39.7	35.5
REP 2	MG/L	8.8	38.6	38.7	36.3
REP 3	MG/L	8.4	37.9	38.4	36.6
REP 4	MG/L	8.4	37.3	38.3	35.8
TOTAL ORGANIC HALIDE - REP 1	MG/L	0.048	0.19	0.17	0.19
REP 2	MG/L	0.061	0.25	0.21	0.19
REP 3	MG/L	0.059	0.26	0.21	0.21
REP 4	MG/L	0.061	0.21	0.21	0.22

Analytical Technologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001267

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00126905	213	213	0	1030	800	102
CHROMIUM HEXAVALENT	MG/L	00126704	<0.02	<0.02	0	0.48	0.50	96
ELECTRICAL CONDUCTIVITY	MG/L	00126703	2020	2020	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
ELECTRICAL CONDUCTIVITY	MG/L	00126704	1810	1810	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
NITRATE AS NITROGEN	MG/L	00126701	4.9	4.9	0	38.0	40.0	83
NITRATE AS NITROGEN	MG/L	00128501	2.0	1.8	10	3.5	2.0	80
PH - REP 1	MG/L	00126703	7.46	7.45	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
PH - REP 1	MG/L	00126704	7.70	7.71	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00126703	38.3	36.9	4	56.1	20.0	93
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00128602	4.0	4.0	0	21.6	20.0	88
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128601	0.078	0.081	4	0.18	0.10	101
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 001267

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/22/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04
CADMIUM	MG/L	<0.005	<0.005	<0.005	<0.005
CHROMIUM	MG/L	<0.01	<0.01	<0.01	<0.01
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02
ZINC	MG/L	0.02	0.01	0.01	0.02

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001267

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00126901	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00126901	<0.01	<0.01	0	1.9	2.0	95
COPPER	MG/L	00126901	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00126901	0.02	0.03	40	2.1	2.0	104

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00126701

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/22/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/22/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW01 006	DATE ANALYZED	: 01/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	0.89
1,1-DICHLOROETHENE	0.73
1,2-DICHLOROETHENE (TOTAL)	0.35
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	3.1
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	16
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
TRIFLUOROTOLUENE (%)	99

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00126702

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/22/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/22/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW03 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<5.0
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	28
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	23
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
1,2-DICHLOROBENZENE	<5.0
1,3-DICHLOROBENZENE	<5.0
1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	<2.0
1,2-DICHLOROETHANE	20
1,1-DICHLOROETHENE	4.0
1,2-DICHLOROETHENE (TOTAL)	<2.0
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	110
METHYLENE CHLORIDE	<20
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	<2.0
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	<2.0
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	65
TRICHLOROFLUOROMETHANE	<20
VINYL CHLORIDE	<2.0
XYLENES (TOTAL)	<10

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	99
TRIFLUOROTOLUENE (%)	98

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00126703

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/22/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/22/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW30 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<5.0
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	34
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	25
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
1,2-DICHLOROBENZENE	<5.0
1,3-DICHLOROBENZENE	<5.0
1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	<2.0
1,2-DICHLOROETHANE	21
1,1-DICHLOROETHENE	4.9
1,2-DICHLOROETHENE (TOTAL)	<2.0
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	140
METHYLENE CHLORIDE	<20
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	<2.0
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	<2.0
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	74
TRICHLOROFLUOROMETHANE	<20
VINYL CHLORIDE	<2.0
XYLENES (TOTAL)	<10

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	97
TRIFLUOROTOLUENE (%)	98

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00126704

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/22/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/22/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW10 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<5.0
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	<2.0
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	<2.0
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
1,2-DICHLOROBENZENE	<5.0
1,3-DICHLOROBENZENE	<5.0
1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	9.8
1,2-DICHLOROETHANE	80
1,1-DICHLOROETHENE	8.4
1,2-DICHLOROETHENE (TOTAL)	<2.0
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	210
METHYLENE CHLORIDE	<20
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	<2.0
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	<2.0
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	84
TRICHLOROFLUOROMETHANE	<20
VINYL CHLORIDE	<2.0
XYLENES (TOTAL)	<10

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	97

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00126705

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/15/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/22/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC TB01 006 (TRIP BLANKS 821,823)	DATE ANALYZED	: 01/25/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001267
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE ANALYZED	: 01/25/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	105

Analytical Technologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001267
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE ANALYZED	: 01/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
TRIFLUOROTOLUENE (%)	90

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001267

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL
REF I.D. : 00126804

DATE EXTRACTED : N/A
DATE ANALYZED : 01/31/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	4.3	108	4.5	113	5
CHLOROBENZENE	<0.50	8.0	8.2	103	9.0	113	9
1,1-DICHLOROETHENE	<0.20	4.0	3.3	83	3.3	83	0
TRICHLOROETHENE	<0.20	4.0	4.0	100	4.4	110	10
TETRACHLOROETHENE	<0.20	4.0	3.8	90	4.1	103	8
BENZENE	<0.50	4.0	4.4	110	4.5	113	2
TOLUENE	<0.50	4.0	4.2	105	4.5	113	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001267

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CALIF.CHEMICAL
REF I.D. : 00128602

DATE EXTRACTED : N/A
DATE ANALYZED : 01/26/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	8.1	20	22	70	22	70	0
CHLOROBENZENE	<2.5	40	26	65	31	78	18
1,1-DICHLOROETHENE	36	20	48	60	47	55	2
TRICHLOROETHENE	100	20	110	50*	110	50*	50
TETRACHLOROETHENE	2.2	20	15	64	17	74	13
BENZENE	<2.5	20	16	80	16	80	0
TOLUENE	<2.5	20	15	75	17	85	13

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to the necessary dilution of the sample

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 001286

February 8, 1990

Camp Dresser & McKee Inc.
18881 Von Karmon, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111

P.O. No.: 33880

Attention: Bill Grove

On January 23, 1990, Analytical Technologies, Inc. received six water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Senior Project Manager

Richard M. Amano
Laboratory Manager

ML:nm

cc: Ed Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc.

ATI I.D. 001286

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
ELECTRICAL CONDUCTIVITY	ELECTRODE	EPA 9050
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
TOTAL ORGANIC CARBON	TOC ANALYZER	EPA 9060
TOTAL ORGANIC HALIDES	TOX ANALYZER	EPA 9020
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/HALL	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 01/23/90
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL REPORT DATE : 02/08/90
ATI I.D. : 001286

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC MW08 006	WATER	01/23/90
02	SCC MW09 006	WATER	01/23/90
03	SCC MW11 006	WATER	01/23/90
04	SCC MW02 006	WATER	01/23/90
05	SCC EB01 006	WATER	01/23/90
06	SCC TB02 006 (TRIP BLANKS 817,819)	WATER	01/23/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 001286

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL

DATE RECEIVED : 01/23/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04	05
CHLORIDE	MG/L	222	329	103	101	<2.0
CHROMIUM HEXAVALENT	MG/L	<0.02	2.28	<0.02	<0.02	<0.02
ELECTRICAL CONDUCTIVITY - REP 1		1720	2070	1530	1460	<20
REP 2		1720	2080	1550	1470	<20
REP 3		1750	2080	1560	1460	<20
REP 4		1740	2090	1550	1470	<20
NITRATE AS NITROGEN	MG/L	4.2	5.9	0.2	6.4	<0.05
PH - REP 1	MG/L	7.63	7.41	7.77	7.70	6.55
REP 2	MG/L	7.61	7.45	7.81	7.72	6.56
REP 3	MG/L	7.61	7.48	7.86	7.72	6.61
REP 4	MG/L	7.68	7.47	7.78	7.78	6.66
TOTAL ORGANIC CARBON - REP 1	MG/L	2.2	3.7	18.9	1.0	<0.5
REP 2	MG/L	2.3	4.0	20.2	1.3	1.1
REP 3	MG/L	1.6	3.5	20.1	0.8	1.2
REP 4	MG/L	2.0	3.6	20.4	0.5	0.8
TOTAL ORGANIC HALIDE - REP 1	MG/L	0.069	0.22	0.083	0.035	0.016
REP 2	MG/L	0.078	0.22	0.088	0.045	0.016
REP 3	MG/L	0.074	0.24	0.078	0.035	0.022
REP 4	MG/L	0.081	0.17	0.074	0.040	0.024

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL ATI I.D. : 001286

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00128803	<2.0	<2.0	0	82.3	80.0	103
CHROMIUM HEXAVALENT	MG/L	00128703	<0.02	<0.02	0	0.20	0.20	100
ELECTRICAL CONDUCTIVITY	MG/L	00126704	1810	1810	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
ELECTRICAL CONDUCTIVITY	MG/L	00128602	2080	2080	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
NITRATE AS NITROGEN	MG/L	00128605	<0.05	<0.05	0	2.0	2.0	100
PH - REP 1	MG/L	00126704	7.70	7.71	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
PH - REP 1	MG/L	00128603	7.77	7.78	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
PH - REP 1	MG/L	00128605	6.55	6.56	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00128602	4.0	4.0	0	21.6	20.0	88
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00128605	1.1	1.3	17	19.7	20.0	93
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128601	0.078	0.081	4	0.18	0.10	101
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128602	0.22	0.24	9	0.35	0.10	120
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128603	0.083	0.078	6	0.28	0.20	100
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A

(CONTINUED NEXT PAGE)

Analytical Technologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL ATI I.D. : 001286

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 001286

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
DATE RECEIVED : 01/23/90
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02	03	04	05
CADMIUM	MG/L	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM	MG/L	<0.01	2.2	<0.01	<0.01	<0.01
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
ZINC	MG/L	0.01	0.02	0.01	0.01	<0.01

Analytical Technologies, Inc. METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111
PROJECT NAME : SOUTHERN CAL.CHEMICAL ATI I.D. : 001286

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00128602	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00128602	2.2	2.2	0	4.1	2.0	95
COPPER	MG/L	00128602	<0.02	0.03	0	2.0	2.0	100
ZINC	MG/L	00128602	0.02	0.03	40	2.0	2.0	99

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128601

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW08 006	DATE ANALYZED	: 01/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	0.49
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	29
1,2-DICHLOROETHANE	0.83
1,1-DICHLOROETHENE	6.6
1,2-DICHLOROETHENE (TOTAL)	4.7
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	1.4
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	28
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
TRIFLUOROTOLUENE (%)	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128602

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW09 006	DATE ANALYZED	: 01/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	<2.5
BROMODICHLOROMETHANE	<1.0
BROMOFORM	<1.0
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	<2.5
CHLOROETHANE	<1.0
CHLOROFORM	8.1
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	<1.0
1,2-DICHLOROBENZENE	<2.5
1,3-DICHLOROBENZENE	<2.5
1,4-DICHLOROBENZENE	<2.5
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	60
1,2-DICHLOROETHANE	3.9
1,1-DICHLOROETHENE	36
1,2-DICHLOROETHENE (TOTAL)	1.3
1,2-DICHLOROPROPANE	<1.0
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	<1.0
ETHYLBENZENE	<2.5
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	2.2
TOLUENE	<2.5
1,1,1-TRICHLOROETHANE	<1.0
1,1,2-TRICHLOROETHANE	<1.0
TRICHLOROETHENE	100
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
XYLENES (TOTAL)	<5.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	89
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128603

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW11 006	DATE ANALYZED	: 01/26/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<5.0
BROMODICHLOROMETHANE	<2.0
BROMOFORM	<2.0
BROMOMETHANE	<2.0
CARBON TETRACHLORIDE	<2.0
CHLOROBENZENE	<5.0
CHLOROETHANE	<2.0
CHLOROFORM	<2.0
CHLOROMETHANE	<2.0
DIBROMOCHLOROMETHANE	<2.0
1,2-DICHLOROBENZENE	<5.0
1,3-DICHLOROBENZENE	<5.0
1,4-DICHLOROBENZENE	<5.0
DICHLORODIFLUOROMETHANE	<2.0
1,1-DICHLOROETHANE	5.5
1,2-DICHLOROETHANE	28
1,1-DICHLOROETHENE	<2.0
1,2-DICHLOROETHENE (TOTAL)	<2.0
1,2-DICHLOROPROPANE	<2.0
CIS-1,3-DICHLOROPROPENE	<2.0
TRANS-1,3-DICHLOROPROPENE	<2.0
ETHYLBENZENE	83
METHYLENE CHLORIDE	<20
1,1,2,2-TETRACHLOROETHANE	<2.0
TETRACHLOROETHENE	<2.0
TOLUENE	<5.0
1,1,1-TRICHLOROETHANE	<2.0
1,1,2-TRICHLOROETHANE	<2.0
TRICHLOROETHENE	46
TRICHLOROFLUOROMETHANE	<20
VINYL CHLORIDE	<2.0
XYLENES (TOTAL)	<10

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	73
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128604

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW02 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	<1.0
BROMODICHLOROMETHANE	<0.40
BROMOFORM	<0.40
BROMOMETHANE	<0.40
CARBON TETRACHLORIDE	<0.40
CHLOROBENZENE	<1.0
CHLOROETHANE	<0.40
CHLOROFORM	<0.40
CHLOROMETHANE	<0.40
DIBROMOCHLOROMETHANE	<0.40
1,2-DICHLOROBENZENE	<1.0
1,3-DICHLOROBENZENE	<1.0
1,4-DICHLOROBENZENE	<1.0
DICHLORODIFLUOROMETHANE	<0.40
1,1-DICHLOROETHANE	<0.40
1,2-DICHLOROETHANE	<0.40
1,1-DICHLOROETHENE	<0.40
1,2-DICHLOROETHENE (TOTAL)	<0.40
1,2-DICHLOROPROPANE	<0.40
CIS-1,3-DICHLOROPROPENE	<0.40
TRANS-1,3-DICHLOROPROPENE	<0.40
ETHYLBENZENE	<1.0
METHYLENE CHLORIDE	<4.0
1,1,2,2-TETRACHLOROETHANE	<0.40
TETRACHLOROETHENE	0.54
TOLUENE	<1.0
1,1,1-TRICHLOROETHANE	<0.40
1,1,2-TRICHLOROETHANE	<0.40
TRICHLOROETHENE	27
TRICHLOROFLUOROMETHANE	<4.0
VINYL CHLORIDE	<0.40
XYLENES (TOTAL)	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	98

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128605

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC EB01 006	DATE ANALYZED	: 02/02/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	6.8
BROMOFORM	0.92
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	7.6
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	7.4
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	106
TRIFLUOROTOLUENE (%)	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00128606

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/23/90
PROJECT #	: 2279-111	DATE RECEIVED	: 01/23/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC TB02 006 (TRIP BLANKS 817,819)	DATE ANALYZED	: 01/25/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	78
TRIFLUOROTOLUENE (%)	94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001286
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE ANALYZED	: 01/25/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	100
TRIFLUOROTOLUENE (%)	105

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001286
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE ANALYZED	: 01/26/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	103
TRIFLUOROTOLUENE (%)	111

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001286
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE ANALYZED	: 01/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
TRIFLUOROTOLUENE (%)	90

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001286
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE ANALYZED	: 02/02/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	104

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001286
PROJECT #	: 2279-111	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	DATE ANALYZED	: 01/24/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
TRIFLUOROTOLUENE (%)	95

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001286

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111	DATE ANALYZED	: 01/26/90
PROJECT NAME	: SOUTHERN CAL.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00128602	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	8.1	20	22	70	22	70	0
CHLOROBENZENE	<2.5	40	26	65	31	78	18
1,1-DICHLOROETHENE	36	20	48	60	47	55	2
TRICHLOROETHENE	100	20	110	50*	110	50*	50
TETRACHLOROETHENE	2.2	20	15	64	17	74	13
BENZENE	<2.5	20	16	80	16	80	0
TOLUENE	<2.5	20	15	75	17	85	13

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to the necessary dilution of the sample.

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 001323

February 8, 1990

Camp Dresser & McKee Inc.
18881 Von Karman, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O. No.: 33880

Attention: Bill Grove

On January 25, 1990, Analytical Technologies, Inc. received three water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Senior Project Manager

Richard M. Amano
Laboratory Manager

ML:bc

cc: Ed Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc.

ATI I.D. 001323

ANALYTICAL SCHEDULE

CLIENT: CAMP DRESSER & McKEE INC. PROJECT NO.: 2279-111-GW-SAMP
PROJECT NAME: SOUTHERN CALIFORNIA CHEMICAL

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHLORIDE	COLORIMETRIC	EPA 325.2
CHROMIUM HEXAVALENT	COLORIMETRIC	EPA 7196
ELECTRICAL CONDUCTIVITY	ELECTRODE	EPA 9050
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
TOTAL ORGANIC CARBON	TOC ANALYZER	EPA 9060
TOTAL ORGANIC HALIDES	TOX ANALYZER	EPA 9020
CADMIUM	ICAP	EPA 6010
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
HALOGENATED VOLATILE ORGANICS	GC/HALL	EPA 8010
AROMATIC VOLATILE ORGANICS	GC/PID	EPA 8020

Analytical Technologies, Inc.

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE DATE RECEIVED : 01/25/90
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL REPORT DATE : 02/08/90
ATI I.D. : 001323

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SCC MW05 006	WATER	01/25/90
02	SCC DIW01 006	WATER	01/25/90
03	SCC TB04 006	WATER	01/15/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	3

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc. GENERAL CHEMISTRY RESULTS

ATI I.D. : 001323

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/25/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02
CHLORIDE	MG/L	114	<2.0
CHROMIUM HEXAVALENT	MG/L	<0.02	<0.02
ELECTRICAL CONDUCTIVITY - REP 1		1380	-
REP 2		1380	-
REP 3		1380	-
REP 4		1370	-
NITRATE AS NITROGEN	MG/L	6.6	<0.05
PH - REP 1	MG/L	7.03	-
REP 2	MG/L	7.11	-
REP 3	MG/L	7.23	-
REP 4	MG/L	7.16	-
TOTAL ORGANIC CARBON - REP 1	MG/L	6.9	-
REP 2	MG/L	6.3	-
REP 3	MG/L	6.4	-
REP 4	MG/L	6.2	-
TOTAL ORGANIC HALIDE - REP 1	MG/L	0.16	-
REP 2	MG/L	0.14	-
REP 3	MG/L	0.15	-
REP 4	MG/L	0.14	-

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001323

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00132302	<2.0	<2.0	0	83.2	80.0	104
CHROMIUM HEXAVALENT	MG/L	00132302	<0.02	<0.02	0	0.24	0.25	96
ELECTRICAL CONDUCTIVITY	MG/L	00132301	1380	1380	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
NITRATE AS NITROGEN	MG/L	00130306	0.67	0.56	18	19.2	20.0	93
PH - REP 1	MG/L	00132301	7.11	7.16	1	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00132301	6.4	6.5	2	20.7	20.0	71
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00130303	0.008	<0.008	0	0.12	0.10	120
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical**Technologies,**Inc. METALS RESULTS

ATI I.D. : 001323

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL

DATE RECEIVED : 01/25/90
REPORT DATE : 02/08/90

PARAMETER	UNITS	01	02
CADMIUM	MG/L	<0.005	<0.005
CHROMIUM	MG/L	0.01	<0.01
COPPER	MG/L	<0.02	0.02
ZINC	MG/L	0.01	0.02

AnalyticalTechnologies, Inc. METALS - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001323

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	00130302	<0.005	<0.005	0	1.9	2.0	95
CHROMIUM	MG/L	00130302	<0.01	<0.01	0	1.8	2.0	90
COPPER	MG/L	00130302	<0.02	<0.02	0	1.9	2.0	95
ZINC	MG/L	00130302	<0.01	<0.01	0	2.0	2.0	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00132301

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/25/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/25/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC MW05 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	<1.0
BROMODICHLOROMETHANE	<0.40
BROMOFORM	<0.40
BROMOMETHANE	<0.40
CARBON TETRACHLORIDE	52
CHLOROBENZENE	<1.0
CHLOROETHANE	<0.40
CHLOROFORM	42
CHLOROMETHANE	<0.40
DIBROMOCHLOROMETHANE	<0.40
1,2-DICHLOROBENZENE	<1.0
1,3-DICHLOROBENZENE	<1.0
1,4-DICHLOROBENZENE	<1.0
DICHLORODIFLUOROMETHANE	<0.40
1,1-DICHLOROETHANE	0.42
1,2-DICHLOROETHANE	2.2
1,1-DICHLOROETHENE	<0.40
1,2-DICHLOROETHENE (TOTAL)	<0.40
1,2-DICHLOROPROPANE	<0.40
CIS-1,3-DICHLOROPROPENE	<0.40
TRANS-1,3-DICHLOROPROPENE	<0.40
ETHYLBENZENE	<1.0
METHYLENE CHLORIDE	<4.0
1,1,2,2-TETRACHLOROETHANE	<0.40
TETRACHLOROETHENE	<0.40
TOLUENE	<1.0
1,1,1-TRICHLOROETHANE	0.41
1,1,2-TRICHLOROETHANE	<0.40
TRICHLOROETHENE	16
TRICHLOROFLUOROMETHANE	<4.0
VINYL CHLORIDE	<0.40
XYLENES (TOTAL)	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	103
TRIFLUOROTOLUENE (%)	95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00132302

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/25/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/25/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC DIW01 006	DATE ANALYZED	: 01/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	0.27
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	99
TRIFLUOROTOLUENE (%)	100

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00132303

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE SAMPLED	: 01/15/90
PROJECT #	: 2279-111-GW-SAMP	DATE RECEIVED	: 01/25/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE EXTRACTED	: N/A
CLIENT I.D.	: SCC TB04 006	DATE ANALYZED	: 01/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	106
TRIFLUOROTOLUENE (%)	102

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	ATI I.D.	: 001323
PROJECT #	: 2279-111-GW-SAMP	DATE EXTRACTED	: N/A
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	DATE ANALYZED	: 01/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	83
TRIFLUOROTOLUENE (%)	90

Analytical Technologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

		ATI I.D.	: 001323
CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/31/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.50
BROMODICHLOROMETHANE	<0.20
BROMOFORM	<0.20
BROMOMETHANE	<0.20
CARBON TETRACHLORIDE	<0.20
CHLOROBENZENE	<0.50
CHLOROETHANE	<0.20
CHLOROFORM	<0.20
CHLOROMETHANE	<0.20
DIBROMOCHLOROMETHANE	<0.20
1,2-DICHLOROBENZENE	<0.50
1,3-DICHLOROBENZENE	<0.50
1,4-DICHLOROBENZENE	<0.50
DICHLORODIFLUOROMETHANE	<0.20
1,1-DICHLOROETHANE	<0.20
1,2-DICHLOROETHANE	<0.20
1,1-DICHLOROETHENE	<0.20
1,2-DICHLOROETHENE (TOTAL)	<0.20
1,2-DICHLOROPROPANE	<0.20
CIS-1,3-DICHLOROPROPENE	<0.20
TRANS-1,3-DICHLOROPROPENE	<0.20
ETHYLBENZENE	<0.50
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.20
TOLUENE	<0.50
1,1,1-TRICHLOROETHANE	<0.20
1,1,2-TRICHLOROETHANE	<0.20
TRICHLOROETHENE	<0.20
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.20
XYLENES (TOTAL)	<1.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	96
TRIFLUOROTOLUENE (%)	96

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001323

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/31/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00128802	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	<0.20	4.0	3.7	93	3.6	90	3
CHLOROBENZENE	<0.50	8.0	7.5	94	6.8	85	10
1,1-DICHLOROETHENE	<0.20	4.0	3.1	78	2.8	70	10
TRICHLOROETHENE	<0.20	4.0	4.2	105	3.7	93	13
TETRACHLOROETHENE	<0.20	4.0	3.8	90	3.7	93	3
BENZENE	<0.50	4.0	4.4	110	3.9	98	12
TOLUENE	<0.50	4.0	4.4	110	3.8	95	15

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 001323

TEST : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

CLIENT	: CAMP DRESSER & MCKEE INC.-IRVINE	DATE EXTRACTED	: N/A
PROJECT #	: 2279-111-GW-SAMP	DATE ANALYZED	: 01/26/90
PROJECT NAME	: SOUTHERN CALIF.CHEMICAL	SAMPLE MATRIX	: WATER
REF I.D.	: 00128602	UNITS	: UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
CHLOROFORM	8.1	20	22	70	22	70	0
CHLOROBENZENE	<2.5	40	26	65	31	78	18
1,1-DICHLOROETHENE	36	20	48	60	47	55	2
TRICHLOROETHENE	100	20	110	50*	110	50*	50
TETRACHLOROETHENE	2.2	20	15	64	17	74	13
BENZENE	<2.5	20	16	80	16	80	0
TOLUENE	<2.5	20	15	75	17	85	13

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to the necessary dilution of the sample

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 001303

February 20, 1990

Camp Dresser & McKee Inc.
18881 Von Karman, Suite 650
Irvine, California 92715

Project Name: Southern California Chemical

Project No.: 2279-111-GW-SAMP

P.O. No.: 33880

Attention: Bill Grove

Enclosed is an amended quality control data sheet reflecting a change in the chloride results.

We apologize for the inconvenience this may have caused you.

Marcilen Lindsey
Senior Project Manager

for Richard M. Amano
Laboratory Manager

ML:nm

cc: Ed Vigil
Southern California Chemical
8851 Dice Road
Santa Fe Springs, CA 90670-0118

Analytical Technologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : CAMP DRESSER & MCKEE INC.-IRVINE
PROJECT # : 2279-111-GW-SAMP
PROJECT NAME : SOUTHERN CALIF.CHEMICAL ATI I.D. : 001303

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHLORIDE	MG/L	00130304	2200	2200	0	**	**	**
CHROMIUM HEXAVALENT	MG/L	00130301	<0.02	<0.02	0	0.50	0.50	100
SPECIFIC CONDUCTANCE -	MG/L	00130303	1530	1530	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
SPECIFIC CONDUCTANCE -	MG/L	00130306	4340	4340	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
NITRATE AS NITROGEN	MG/L	00130306	0.67	0.56	18	19.2	20.0	93
PH - REP 1	MG/L	00130303	7.42	7.43	0	N/A	N/A	N/A
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00130302	1.6	1.3	20	20.9	20.0	97
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00130305	1.0	1.1	10	19.6	20.0	93
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC CARBON -	MG/L	00132301	6.4	6.5	2	20.7	20.0	71
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00128603	0.083	0.078	6	0.28	0.20	100
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
TOT. ORGANIC HALIDE -	MG/L	00130303	0.008	<0.008	0	0.12	0.10	120
REP 2	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 3	MG/L		N/A	N/A	N/A	N/A	N/A	N/A
REP 4	MG/L		N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

** Due to the necessary dilution of the sample, result was not attainable

APPENDIX D

WCAS ANALYTICAL REPORTS

January 30, 1990

WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

SOUTHERN CALIFORNIA CHEMICAL
8851 Dice Road
Santa Fe Springs, CA 90670

Attn: Ed Vigil

JOB NO. 14664

LABORATORY REPORT

Samples Received: Three (3) spiked solutions prepared by WCAS
Date Received: 1-22-90
Purchase Order No: 33882

The sample was analyzed as follows:

Samples Analyzed	Analysis	Results
One (1) spiked solution	Volatile Aromatics by EPA 602	Data Sheet
One (1) spiked solution	Selected Metals by ICPMS	Table I
One (1) spiked solution	Hexavalent Chromium by EPA 7196/IC	Table II

cc: Camp, Dresser & McKee
Attn: Bill Grove

Michael Shelton
Senior Chemist

D. J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

SOUTHERN CALIFORNIA CHEMICAL
Mr. Ed Vigil

Job # 14664
January 30, 1990

LABORATORY REPORT

TABLE I

Parts Per Million (mg/L)

Total Metals

Sample ID	Cadmium	Copper	Chromium	Zinc
Amount Spiked	0.500	1.50	5.00	3.00
Amount Found	0.52	1.5	5.3	2.8
Detection Limit	0.0002	0.02	0.001	0.002

Date Analyzed: 1/24/90

TABLE II

Parts Per Million (mg/L)

Sample ID	Hexavalent Chromium
Amount Spiked	1.00
Amount Found	1.0
Detection Limit	.001

Date Analyzed: 1/29/90

Client: SOUTHERN CALIFORNIA CHEMICAL
Job No: 14664
Date:
Analyzed: 29-Jan-90
Analysis: EPA 602 (8020)

Sample: 602 SPIKE
Matrix: Water
Samp Amt: 0.5 ml
Dil Fact: 1

ug/L

Compound	Amount Spiked	Amount Found	Detection Limits
Benzene	100.7	126	2
Toluene	125.9	108	2
Chlorobenzene	-	ND	2
Ethylbenzene	111.3	82	2
Total Xylenes	244	190	2
1,3-Dichlorobenzene	-	ND	2
1,4-Dichlorobenzene	-	ND	2
1,2-Dichlorobenzene	-	ND	2

ND-Not Detected. The limit of detection is reported above.

APPENDIX E

COMPLETED COC FORMS

CHAIN OF CUSTODY RECORD

02126

Camp Dresser & McKee Inc.

CDM

PROJECT NAME Southern Cal. Chemical

PROJECT NUMBER 2279-111

Field Log Book Reference No. ____

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA 601/602	PEST./PCBs	TRACE METALS*	Cr(VI)	NO3 as N	pH, E.C.	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC * MW01 * 006	01/22/90	1030	SCC-MW01	Liquid	X		X	X	X	X	X	X	X	2		40 ml VOA
							X	X						1		500 ml poly
								X	X					1		500 ml poly
									X	X				1		100 ml poly
										X	X			4		100 ml poly
											X	X		4		125 ml ~~poly~~ glass
													X	4		250 ml ~~poly~~ glass
SCC MW03 006	1/22/90	1300	SCC-MW03	Liquid	X									2		40 ml VOA
							X	X						1		500 ml poly
								X	X					1		500 ml poly
									X	X				1		100 ml poly
										X	X			4		100 ml poly
											X	X		4		125 ml ~~poly~~ glass
													X	4		250 ml ~~poly~~ glass

MW01 - Please filter TRACE METALS
* Trace Metals * Cd, Cr(T), Cu, Zn * Cr(VI) has a 24 hour holding time. *

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) K. Treiberg, B. Grove

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B. Grove	②		④	⑤
DATE/TIME (22 Jan / 1735	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME 1/22/90 8:10
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
①	②	③	④	⑤ Marian Van Derbeg
DATE/TIME (1/22/90 1735	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (1/22/90 8:10 pm

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
REDI EXPRESS	B. Grove	Marian Van Derbeg	1-22-90 8:10 pm

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME Southern Cal. Chemical PROJECT NUMBER 2279-111

Field Log Book Reference No. ____

SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA 601/602	PEST-PCB	TRACE METALS*	Cr(VI)	NO3 as N	pH, EC	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC	MW30	006	01/22/90	1200	SCC-MW30	Liquid	X									2		40 ml VOA
									X							1		500 ml poly
										X						1		500 ml poly
											X					1		100 ml poly
												X				4		100 ml poly
													X			4		125 ml glass
														X		4		200 ml glass
SCC	MW10	006	01/22/90	1600	SCC-MW10	Liquid	X									2		40 ml VOA
									X							1		500 ml poly
										X						1		500 ml poly
											X					1		100 ml poly
												X				4		100 ml poly
													X			4		125 ml glass
														X		4		200 ml glass
SCC	TB01	006	1/15/90	—	82/Trip Blank 4823	↓	X									2		40 ml VOA

BG

*Trace Metals Cd, Cr(T), Cu, Zn * Cr(VI) has a 24 hour holding time.*

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

03 04 05

SAMPLED BY (SIGN) K. Tsiberg, B. Stone

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B. Stone	②		④	⑤
DATE/TIME (22/Jan/1735)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (1/22/90 8:16)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
①	②	③	④	⑤ M. Van Dorsten
DATE/TIME (1/22/90 1735)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (1-22-90 8:10 pm)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express		Marian Van Dorsten	1-22-90 8:10 pm

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

CDM

PROJECT NAME Southern Cal. Chemical

PROJECT NUMBER 2279-111

Field Log Book Reference No. ____

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA 601/602	PEST-PCB	TRACE METALS*	Cr(VI)	NO3 as N	pH, EC	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC MW08 006	01/23/90	08:50	SCC-MW08	Liquid	X			X						2		40 ml VOA
							X							1		500 ml poly
								X						1		500 ml poly
									X					1		100 ml poly
										X				4		100 ml poly
											X			4		125 ml glass
												X		4		200 ml glass
SCC MW09 006	01/23/90	11:10	SCC-MW09	Liquid	X									2		40 ml VOA
							X							1		500 ml poly
								X						1		500 ml poly
									X					1		100 ml poly
										X				4		100 ml poly
											X			4		125 ml glass
												X		4		200 ml glass

* Trace Metals: Ca, Cr(T), Cu, Zn * Cr(VI) has a 24 hour holding time. *

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) K. Treiberg, B. Grove

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B. Grove	② [illegible]	____	④ ____	⑤ ____
DATE/TIME 23 Jan 90 1730	DATE/TIME 1/23/90	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① [illegible]	② ____	③ ____	④ ____	⑤ ____
DATE/TIME 1/23/90 1730	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express Couriers	[illegible]	Natalie Kaeb	1-23-90, 8:05

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME Southern Cal. Chemical PROJECT NUMBER 2279-111

Field Log Book Reference No. ____

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA 601/602	TRACE METALS*	Cr(VI), Cl, NO3 as N, Alk, EC	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC MW[redacted]11 0006	01/23/90	14:00	SCC-MW[redacted]11	Liquid	X		X				2		40 ml VOA
						X					1		500 ml poly
							X				1		500 ml poly
								X			1		100 ml poly
									X		4		100 ml poly
										X	4		125 ml glass
											4		200 ml glass
SCC MW02 0006	01/23/90	15:30	SCC-MW02	Liquid	X						2		40 ml VOA
						X					1		500 ml poly
							X				1		500 ml poly
								X			1		100 ml poly
									X		4		100 ml poly
										X	4		125 ml glass
											4		200 ml glass

Metals are: Cd, Cr(T), Cu, Zn Cr(VI) has a 24 hour holding time*

03 04

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) B Stone, K Treiberg

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B Stone	② [illegible]		④	⑤
DATE/TIME (23 Jan 90 1730)	DATE/TIME (1-25 *)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① [illegible]	②	③	④	⑤
DATE/TIME (1-23-90 1730)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
COURIER FEDERAL EXPRESS	[illegible]	Valerie Kaade	8:05 pm, 1-23-90

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc.

CDM

PROJECT NAME Southern Cal. Chemical

PROJECT NUMBER 2279-111

Field Log Book Reference No. ____

SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA	PEST-PCB	TRACE METALS	Cr(VI)	NO3 as N	pH	EC	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
05 SCC	EB01	0006	01/23/90	11:00	SCC-EB01	Liquid	X		X	X	X	X	X	X	X		2		40 ml VOA
																	1		500 ml poly
																	1		500 ml poly
																	1		100 ml poly
																	4		100 ml poly
																	4		125 ml glass
																	4		200 ml glass
06 SCC	TB02	006	01/15/90	—	817 & 819 Trip Blk	Liquid	X										2		40 ml VOA

* Trace Metals: $Cr_{(T)}$, Cd, Cu, Zn * $Cr_{(VI)}$ has a 24 hour holding time *

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) K. Treiberg, B Stone

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① B Stone	② [illegible]		④	⑤
DATE/TIME 23 Jan 90 1730	DATE/TIME 1-23-90	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① [illegible]	②	③	④	⑤
DATE/TIME 1-23 to 17 30	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
COURIER - FEDEX	[illegible]	[illegible]	8:05 pm 1-23-90

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME So Cal Chem

PROJECT NUMBER 2279.111-GW.Sampl

Field Log Book Reference No. 2

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR.-ORG.	VOA's	TCL-PEST.-PCB	TRACE METALS	NO3 as N	PH	CHEM	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
01 SCC MW06B 006	24 Jan	14:30	MW06B	Water	X									2		40ml VOA
										X				1		500ml Poly
							X							1		500ml Poly
								X						1		100ml Poly
									X					4		100ml Poly Quad
											X			4		125ml Glass Quad
												X		4		200ml Glass Quad
02 SCC MW07 006	24 Jan	16:45	MW07		X									2		40ml VOA
										X				1		500ml Poly
							X							1		500ml Poly
								X						1		100ml Poly
									X					4		100ml Poly Quad
											X			4		125ml Glass Quad
												X		4		200ml Glass Quad

* Metals are: Cd, Cr(T), Cu, Zn * Cr VI has a 24 hr Holding time *

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) B. Grove, K. Thenberg

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① DATE/TIME (1/24/90 16:01)	② DATE/TIME (/)	DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME (1/24/90 18:20)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① DATE/TIME (1/24/90 16:01)	② DATE/TIME (/)	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ Christine Trudo DATE/TIME (1/24/90 18:20)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
REDI EXPRESS		Patricia Kardo	1/24/90, 8:20p

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME SoCal Chemical

PROJECT NUMBER 2279-111-GW Stamp

Field Log Book Reference No. 2

SAMPLE NUMBER			1990 DATE	hrs TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG.	VOA's 624	PEST./PCB	TRACE METALS	Cr VI	Nos and N	pH	TOC	TOX	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
03 SCC	MW 4A	006	24 Jan	13:30	MW 4A	Water		*								2		40 ml VOA
									*							1		500 ml poly
										*						1		500 ml poly
											*					1		100 ml poly
												*				4		100 ml poly Quad
													*			4		125 ml glass Quad
														*		4		200 ml glass Quad
04 SCC	MW04	006	24 Jan	0845	MW4			*								2		40 ml VOA
									*							1		500 ml poly
										*						1		500 ml poly
											*					1		100 ml poly
												*				4		100 ml poly Quad
													*			4		125 ml Glass Quad
														*		4		200 ml Glass Quad
	EB03 BH				L	BH												
		* Metals are: Cd Cr(T) Cu Zn *				Cr VI	has a 24 hr holding time *											

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) B. Hone, K. Treiberg

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① DATE/TIME (24 Jan 1681)	② DATE/TIME (/)	DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME (1/24/90 18:20)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① DATE/TIME (1/24/90 6 C( )	② DATE/TIME (/)	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ Christine Tondo DATE/TIME (1/24/90 8:20)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express Courier		Patricia Kando	1-24-90, 8:30

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME So Cal Chem

PROJECT NUMBER 2279.111.GW.SAMP

Field Log Book Reference No. 2

SAMPLE NUMBER			1990 DATE	HRS TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES (EXTR. ORG. / VOA's / METALS / Cr VI / Hex Cr / pH / TOX)	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC	EB02	006	24 Jan	1100	EB02	Water	VOA, Metals, Cr VI, TOX	2		40 ml VOA
							Metals	1		500 ml Poly
							Cr VI	1		500 ml Poly
							Hex Cr	1		100 ml Poly
							pH	4		100 ml Poly Quad
							TOX	4		125 ml Glass Quad
								4		200 ml Glass Quad
SCC	MW31	006	24 Jan	1000	MW31		VOA, Metals, Cr VI, TOX	2		40 ml VOA
							Metals	1		500 ml Poly
							Cr VI	1		500 ml Poly
							Hex Cr	1		100 ml poly
							pH	4		100 ml Poly Quad
							TOX	4		125 ml Glass Quad
								4		200 ml Glass Quad
SCC	TB03	006	15 Jan	—	#5 818 + 820		VOA	2		40 ml VOA

* Metals are: Cd Cr (T), Cu, Zn * Cr VI was a 24 hr Holding time *

SAMPLED BY (SIGN) B Grove, K. Treiberg

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① DATE/TIME (24 Jan, 608)	② DATE/TIME (/)	DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME (1/24/90 8:20)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① DATE/TIME (1/24/90 6 e(1)	② DATE/TIME (/)	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ Christine Tondo DATE/TIME (1/25/90 8:20)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
REDI EXPRESS		Christine Tondo	1/24-90, 8:20

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

Silvertrove 714-732-3452

CHAIN OF CUSTODY RECORD

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME So Cal Chem

PROJECT NUMBER 2279.111-GW-SAMP

Field Log Book Reference No. 2

SAMPLE NUMBER	1990 DATE	hrs TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES: EXTR. ORG. / VOC / PEST. / PCB / TRACE METALS / 602 only / Cr+6 / Lab Control Chk	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
SCC - SP01 - 006	24 Jan	1030	SP01	liquid	X / X / X	2 / 1 / 1		40ml VOA; 500ml poly; 500ml poly

* Cr+6 has a 24 hour holding time *

07

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples

SAMPLED BY (SIGN) B. Stone, K. Tinberg

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① DATE/TIME (24 Jan 91 1600)	② DATE/TIME (/)	DATE/TIME (/)	④ DATE/TIME (/)	⑤ DATE/TIME 1/24/90 18:20
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① DATE/TIME 1/24/91 1600	② DATE/TIME (/)	③ DATE/TIME (/)	④ DATE/TIME (/)	⑤ Christine Tonado DATE/TIME (1/24/90 2000)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Redi Express Couriers		Katrina Lande	1-24-90 8:20pm

CHAIN OF CUSTODY RECORD

CW323

Camp Dresser & McKee Inc. **CDM**

PROJECT NAME Southern Cal. Chemical

PROJECT NUMBER 2279-111-GW-SAMP

Field Log Book Reference No. ____

	SAMPLE NUMBER			DATE	TIME	SAMPLE LOCATION	SAMPLE TYPE	ANALYSES	NUMBER OF CONTAINERS	LOG BOOK PG. NO.	REMARKS
01	SCC	MW05	006	01/25/90	09:30	MW5	Liquid	VOA 601/602, TRACE METALS*, Cr(VI), TOX	2		40 ml VOA
											500 ml poly
											500 ml poly
											100 ml poly
									4		100 ml poly quad
									4		125 ml glass quad
									4		200 ml glass quad
02	SCC	DIW01	006	01/25/90	10:00	DIW	Liquid	BJ, VOA 601/602, TRACE METALS*, Cr(VI)	2		40 ml VOA
									1		500 ml poly
									1		500 ml poly
									1		100 ml poly
03	SCC	TB04	006	01/15/90	—	Trip Blanks #822 & 824	Liquid	VOA 601/602	2		40 ml VOA

* Trace Metals are: Cd, Cr(T), Cu, Zn * Cr(VI) has a 24 hour holding time *

SAMPLED BY (SIGN) K. Treiberg, TS Stone, /, /

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
① TS Stone	② EE Vigil		④	⑤
DATE/TIME (25 Jan 1145)	DATE/TIME (25 Jan 1150)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (1/25/90 6:35)
RECEIVED BY (SIGN)	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**	**RECEIVED BY (SIGN)**
① EE Vigil	②	③	④	⑤
DATE/TIME (25 Jan 1145)	DATE/TIME (1/25/90 1150)	DATE/TIME (/)	DATE/TIME (/)	DATE/TIME (/)

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Courier		Patricia Kanda	1-25-90, 6:35 pm

LEGEND: Original: Return to Sample Traffic Control Center Copies: Ship with Samples